

4. REGIONAL AIRPLANE SAMPLING

The MRI Cessna 206 airplane was utilized to sample the air quality and meteorology on a regional basis. The broad objective of the airborne sampling was to provide a data base for use in regional modeling studies. Special attention was given to documenting the areal distribution of ozone. The aircraft data will be used to supplement the standard and project ground monitoring network. Specific flights were designed to measure pollutant flux through the Newhall, Cajon, and Banning passes, and over the San Bernardino Mountains. Additional sampling was conducted downwind of those regions in the Mojave Desert and Coachella Valley. Tracer samples were collected at scheduled frequencies for later analysis by Caltech. Each sample was identified and logged with respect to time and aircraft position. To this end, 13 missions were flown while logging a total of 45.7 hours of aircraft time. A summary of the sampling missions is given in Table 4-1.

4.1 AIRCRAFT SAMPLING SYSTEM

For the Southeast Desert Oxidant Study the MRI aircraft was equipped with the aerometric instruments described in Table 4-2.

Data from the various monitoring instruments were recorded on magnetic tape at a rate of one scan per second. A two-channel strip chart recorder was provided in the aircraft for observer use, but not used in the data processing. An electrostatic printer simultaneously recorded the data as a backup. Each data cartridge contained about 1 hour of data, so any given aircraft sampling flight required several cartridges. During the course of the study, the field data collected was hand-carried to the MRI-North Office where they were dumped and reviewed for quality assurance by the MRI data processing coordinator.

4.2 SAMPLING METHODOLOGY

The specific flight plan for any given sampling mission depended upon the particular goals of that test, but nevertheless consisted of a combination of spiral ascents (or descents), which map the atmosphere above a location as a function of altitude, and of horizontal traverses. The traverse altitudes were selected by the observer in the airplane after review of the spiral normally flown at or near the traverse start point. The altitude selection would be based on the depth of the surface mixing layer or the occurrence of regions of high ozone concentrations aloft. Sampling was thusly designed to define the horizontal variability within the mixing layer or to define the extent of elevated pollutants.

Table 4-1 MRI 206 Aircraft Flight Summary
 Southeast Desert Transport Study
 July-August 1981

<u>Date</u>	<u>Time(PDT)</u>	<u>Purpose of Flight</u>
7/09/81	1529-1917	Document transport over San Bernardino Mountains, Cajon Pass, and Banning Pass.
7/14/81	1534-1930	Document transport through Newhall Pass.
7/15/81	0833-1056	Measure carry-over in the Mojave Desert.
7/18/81	1512-1656	Document transport over Cajon Pass into Mojave Desert.
7/19/81	0656-0925	Measure carry-over in the Mojave Desert.
7/22/81	1626-2040	Document transport over San Bernardino Mts. and through Banning Pass into the Coachella Valley.
7/23/81	0652-0914	Measure carry-over in the Coachella Valley.
7/27/81	1609-2020	Document transport through the Cajon and Banning Passes.
7/30/81	1510-2240	Document transport through Banning Pass, within the Coachella Valley and East.
8/03/81	1610-2007	Document transport over San Bernardino Mts., Cajon and Banning Passes.
8/11/81	0925-1329	Document morning transport within the Coachella Valley.

Table 4-2
MRI Cessna 206 Instrument Configuration

- Sulfur Dioxide - Meloy 285 E
- Ozone - Monitor Labs 8410
- Oxides of Nitrogen - Monitor Labs 8440
- Integrating Nephelometer - MRI Model 1550
- Temperature - MRI Vortex-Housed Thermister
- Dew Point - Cambridge Systems 137
- Turbulence - MRI 1120 UITS
- Altitude, Indicated Airspeed - Validyne Pressure
Transducers and Pitot Static Probe
- Position - Aircraft VOR/DME
- Data System - LSI 11 Computer System. One scan per
sec logged on a DecTape II data cartridge recorder
- Chart Recorder - Linear Instruments Model #486 (2-channel)

4.3 AIRCRAFT CALIBRATIONS

Multipoint calibrations on the gas instruments were performed prior to and at the completion of the field program and on a weekly basis during the field study. Corresponding single point calibrations were made on the nephelometer. Prior to each flight, a standard checkout procedure was followed to insure that the equipment and recording devices were functioning properly.

The CARB audit of the ozone monitor on 5 August 1981 reported a +2.79% deviation from their standard using the MRI slope factor. This is well within the 10% quality control limits expected. No other equipment was audited.

4.4 DATA TAPE ORGANIZATION AND FORMAT

The data obtained by the MRI aircraft on this study have been transmitted to the ARB on industry compatible 9-track tape. Those data are provided at a rate of one record per second of flight data.

The data tape format is:

- 9-track
- 800 BPI
- Odd parity
- Unlabeled
- Binary (two's complement)
- Fixed record length (2100 integer words)

The combined tape contains data from numerous single tapes (called DATA FILES) organized according to Figure 4-1. Each DATA FILE contains data collected during a single sampling flight by the MRI aircraft.

The first record in each DATA FILE is the CARTRIDGE HEADER RECORD (Table 4-3). It contains the tape number, the recording date, and type of data.

A PASS HEADER RECORD (Table 4-4) identifies the flight path for the succeeding records. It contains a unique pass header identifier, and pass number.

Each 2100 word DATA RECORD contains 30 data scans except for the last DATA RECORD in the pass which may contain less than 30 data scans. Each scan contains the instrument measurements and a unique identification number (words 69 and 70) as shown in Table 4-5. A listing for the Final Clean Data, Tape Format is presented in Table 4-5.

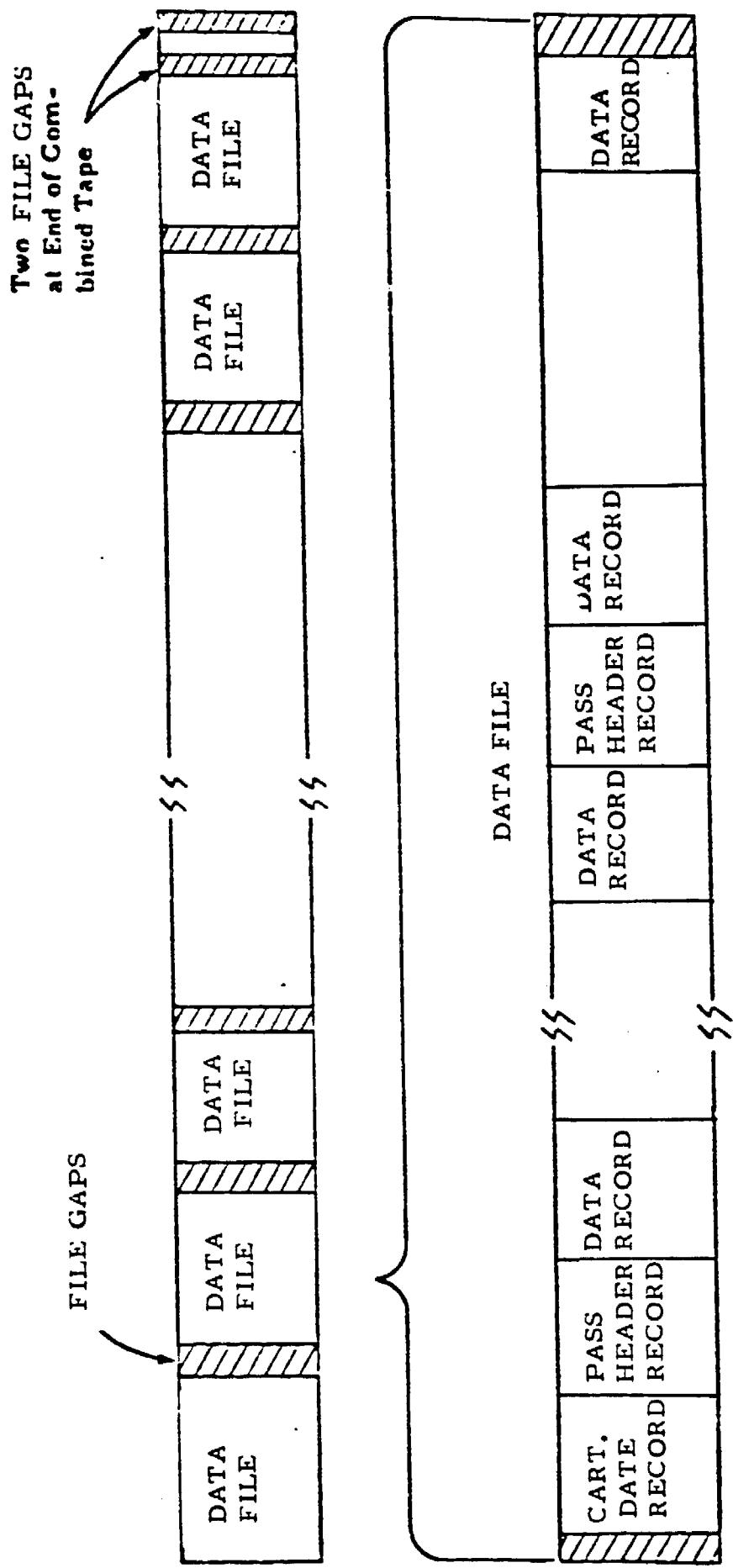


Figure 4-1. MRI Combined Tape Format

Table 4-3
Cartridge Header Record Format

	Word	Parameter
Cartridge Identifiers	1	Processing tape number
	2	Month
	3	Day } of flight
	4	Year
	5	1 = Raw data 2 = Processed data (CDF Data)
	6-2100	

Table 4-4
Pass Header Record Format

Word	Parameter	Comments
1	999	Pass header
2	999	Identifier
3	Pass number	
4	Type of pass (1 = spiral, 2 = traverse or orbit)	
5	Number of records during pass	
6	Maximum flight altitude in meters	
7	Minimum flight altitude in meters	
8	Average ground elevation in meters	
9	Traverse length in 0.1 km	
10	Internal use	
11	Pass starting point identifier	
12-17	Internal use	
18	Pass ending point identifier	
19-2100		

Table 4-5
 Southeast Desert Oxidant Study
 Final Clean Data Tape Format

Channel	Parameter	Unit of CDF	MAX*	Comments
1	Time-Hours	1 Hr.	23	
2	Time-Min.	1 Min.	59	
3	Time-Sec.	1 Sec.	59	
4	-	-	-	
5	-	-	-	
6	Sampling Altitude	m-msl	3000	
7	Pressure	1 mb	1034	
8	Indicated Airspeed	1 m/sec	100	
9	Turbulence	0.1 cm $2/3$ sec $^{-1}$	100	
10	Temperature	0.1°C	± 500	
11	Dew Point	0.1°C	± 500	
12	-	-	-	
13	-	-	-	
14	b _{scat}	$1 \times 10^{-6} \text{m}^{-1}$	1000	
15	O ₃	1 ppb	500	
16	NO	1 ppb	206	
17	NO _x	1 ppb	200	
18	SO ₂	1 ppb	100	
19	-			
20	Distance from start point	0.1 km	-	
21-67	NOT USED			
68	Internal Use			
69 } 70 }	Record Number			

*32767 = missing data.

4.5 FLIGHT SUMMARIES

Included in this section are the following:

- Flight Summary Tables
- Sampling Routes
- End Point and Spiral Location Tables
- Data Plots

The tables, maps, and data plots are ordered together for each flight.

The Flight Summary Tables contain the data tape identification, sampling times, locations, altitudes and comments for each sampling mission. The data have been broken down into observational units referred to as passes which are either a traverse or a spiral. Thusly, each traverse or spiral can be uniquely identified by a tape number and pass number. It should be noted that each flight includes one or two "zero" spirals which are used to define the instrument zero-altitude relationships; a relationship used during data processing. Since during these types of passes the gas monitors are in zero mode, the data have not been included on the data tape.

Maps showing the flight paths and spiral locations corresponding to the location numbers referred to in the Flight Summary Tables are also given for each flight. The latitude and longitude and description of each end point and spiral location are contained in a separate table.

Data plots are provided which show the variation of each measured parameter as a function of distance or altitude, depending on the type of pass. The data are presented on three separate plot panels for viewing convenience. Temperature is repeated on each panel for spiral passes and similarly altitude repeated for traverses. The abscissa axis is percent of full scale and scaling factors corresponding to each parameter are given in a legend accompanying each panel. The ordinate axis scale on traverse plots (distance) varies dependent upon traverse length to achieve maximum resolution.

TEST 1 - JULY 9-10, 1981

Date: July 9, 1981

MRI FLIGHT SUMMARY

SOUTHEAST DESERT OZONE TRANSPORT STUDY

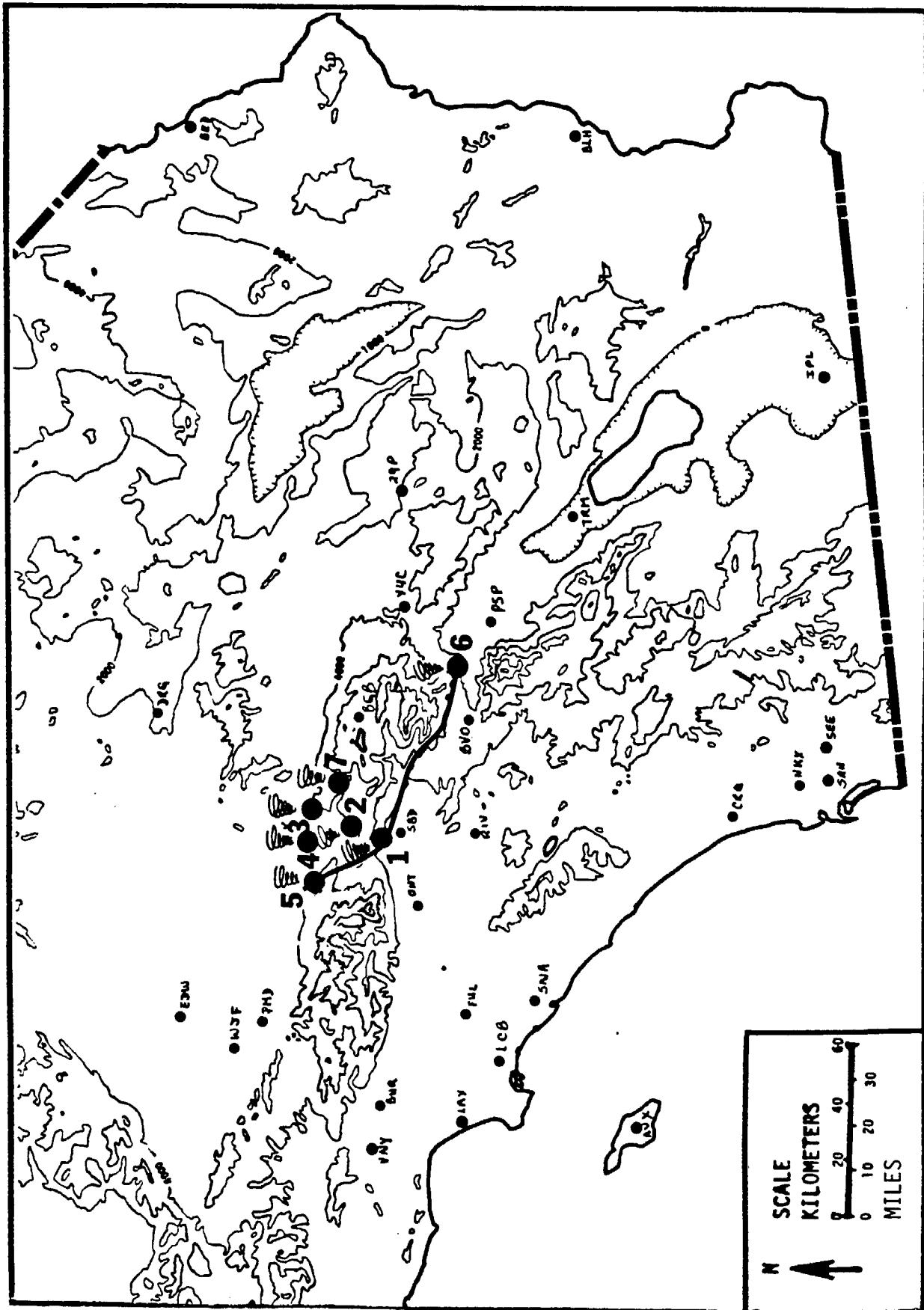
Tape #: 251

Pass No.	Sampling Start (PDT)	Sampling Times	Flight Type	End Points	Sampling m MSL	Altitude	Traverse Length or Orbit Time	Tracer Samples	Comments
1	1542	1559	Spiral	1	518-2286	N.A.	A1-13		Sfc Elev = 488 m
2	1602	1608	Spiral	2	2438-1615	N.A.	A14-19		Sfc Elev = 1372 m
3	1615	1636	Spiral	3	945-2743	N.A.	A20-32		Sfc Elev = 915 m
4	1648	1703	Spiral	4	3261-1219	N.A.	A33-45		Sfc Elev = 1204 m Downwind Cajon Pass
5	1713	1729	Spiral	5	1311-3048	N.A.	A49-61		Sfc Elev = 1296 m
6	1730	1737	Zero Spiral		3048-1524	N.A.	0		Instrument calibration
7	1739	1808	Traverse	5 - 6	1524- 945	104.6 Km.	A62-90		Within 350 m of terrain
8	1809	1824	Spiral	6	411-2134	N.A.	A91-101		Sfc Elev = 305 m
9	1843	1851	Spiral	7	3353-1554	N.A.	A102-114		Sfc Elev = 1557 m
10	1854	1901	Spiral	3	914-1929	N.A.	A115-121		Sfc Elev = 915 m

Note: SO₂ monitor INOP

9 July 1981 Tape #251
 TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°09.2'	117°17.0'	Highland
2	34°14.5'	117°16.0'	Lake Gregory
3	34°22'	117°14.0'	East of Hesperia
4	34°20.5'	117°26.0'	Hespe Intersection Cajon Pass
5	34°22.0'	117°33.0'	West of Cajon Pass Pear Blossom Hwy.
6	33°55.2'	116°40.5'	Intersection of Hwys 110 & 111
7	34°15.5'	117°11.0'	Lake Arrowhead



SOUTHEAST DESERT OZONE TRANSPORT STUDY

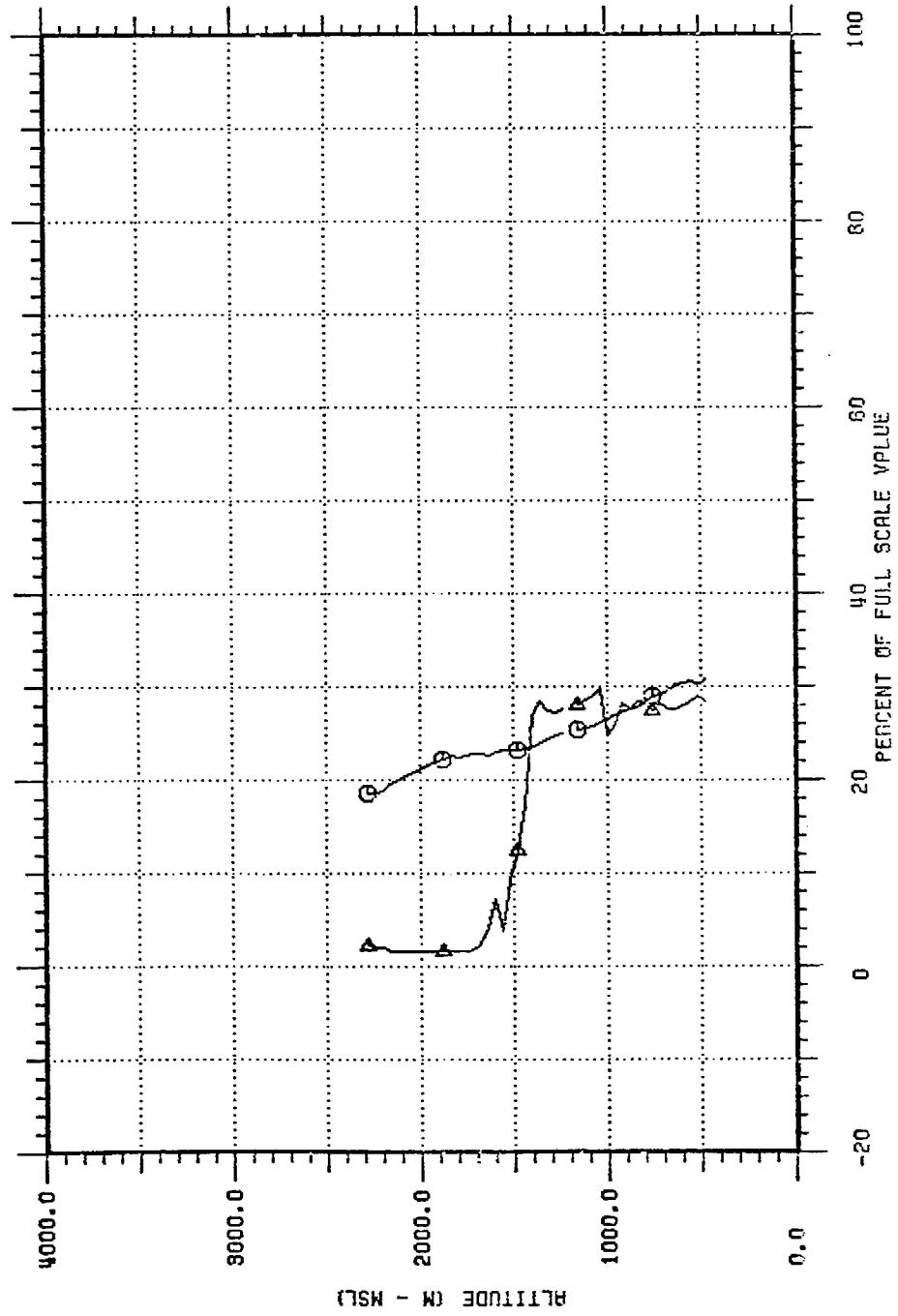
MRI SAMPLING FLIGHT

July 9, 1981

Tape #251

**SED TRANSPORT
SPIRAL AT POINT 1**

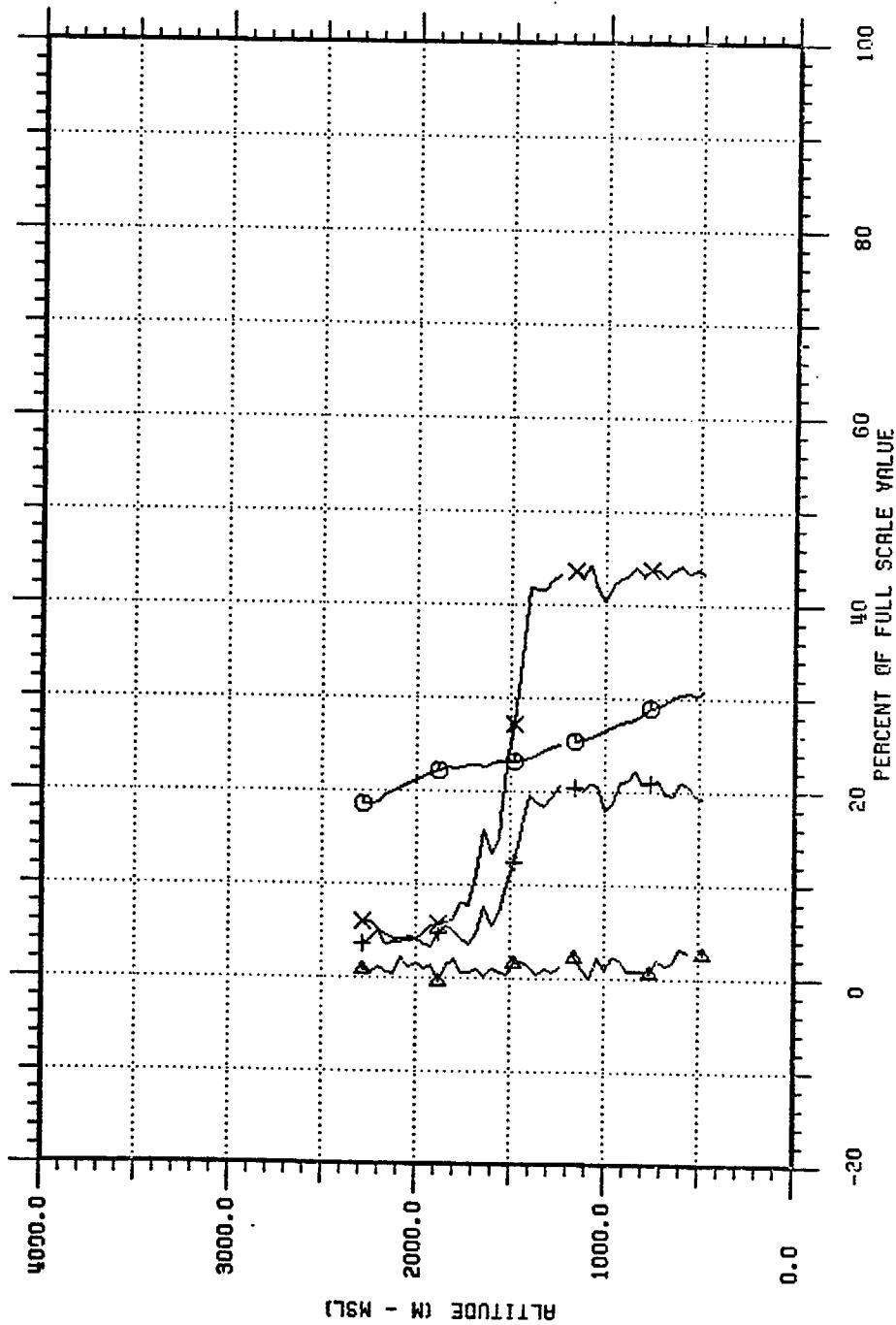
TAPE/PASS: 251/1 DATE: 7 / 9 /81
TIME: 1542 TO 1559 (PDT)



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23:00:23

SED TRANSPORT
SPIRAL AT POINT 1

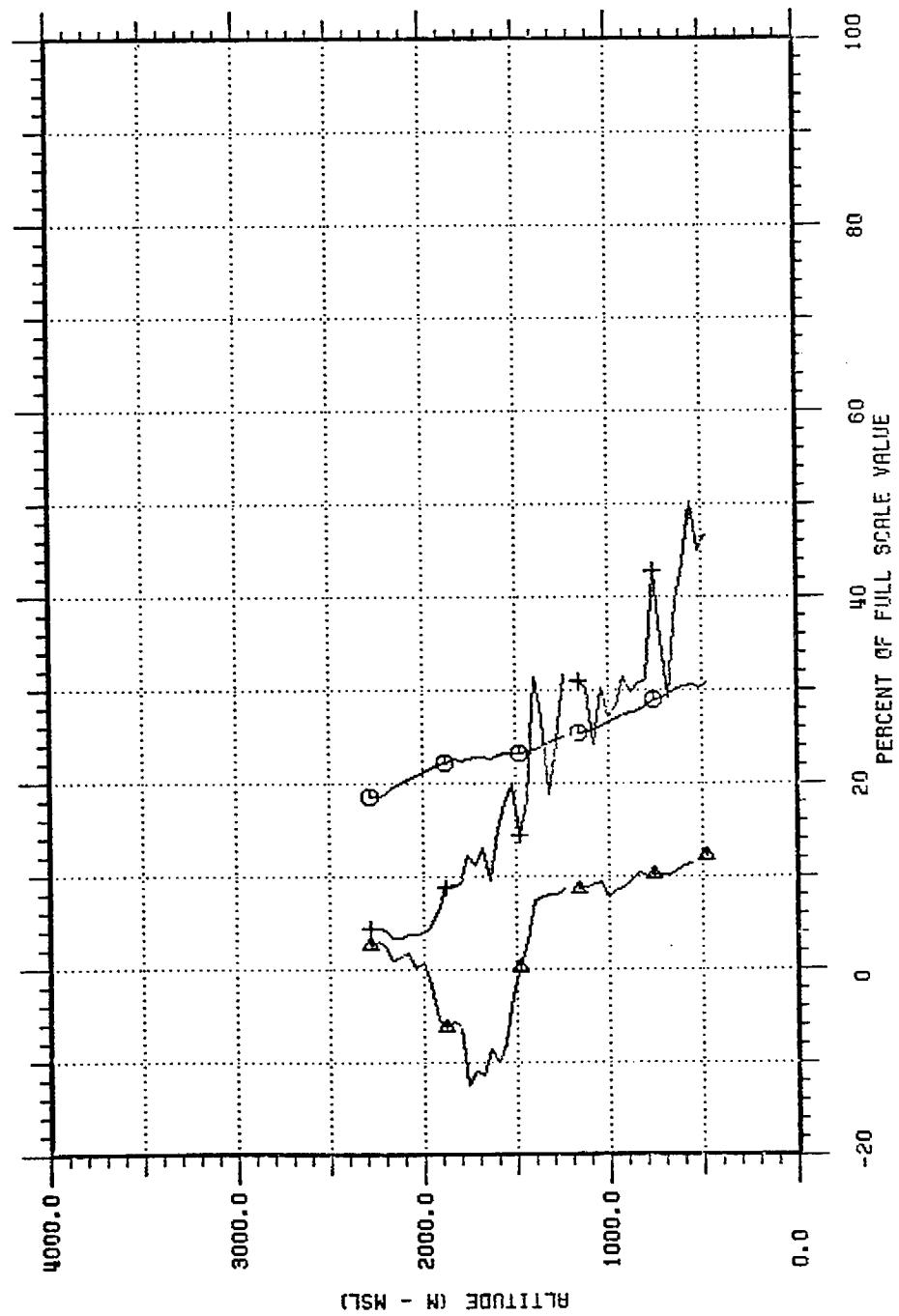
TAPE/PASS: 251/1 DATE: 7 /9 /81
TIME: 1542 TO 1559 (PDT)



810324.0
23:00:23

SED TRANSPORT
SPIRAL AT POINT 1

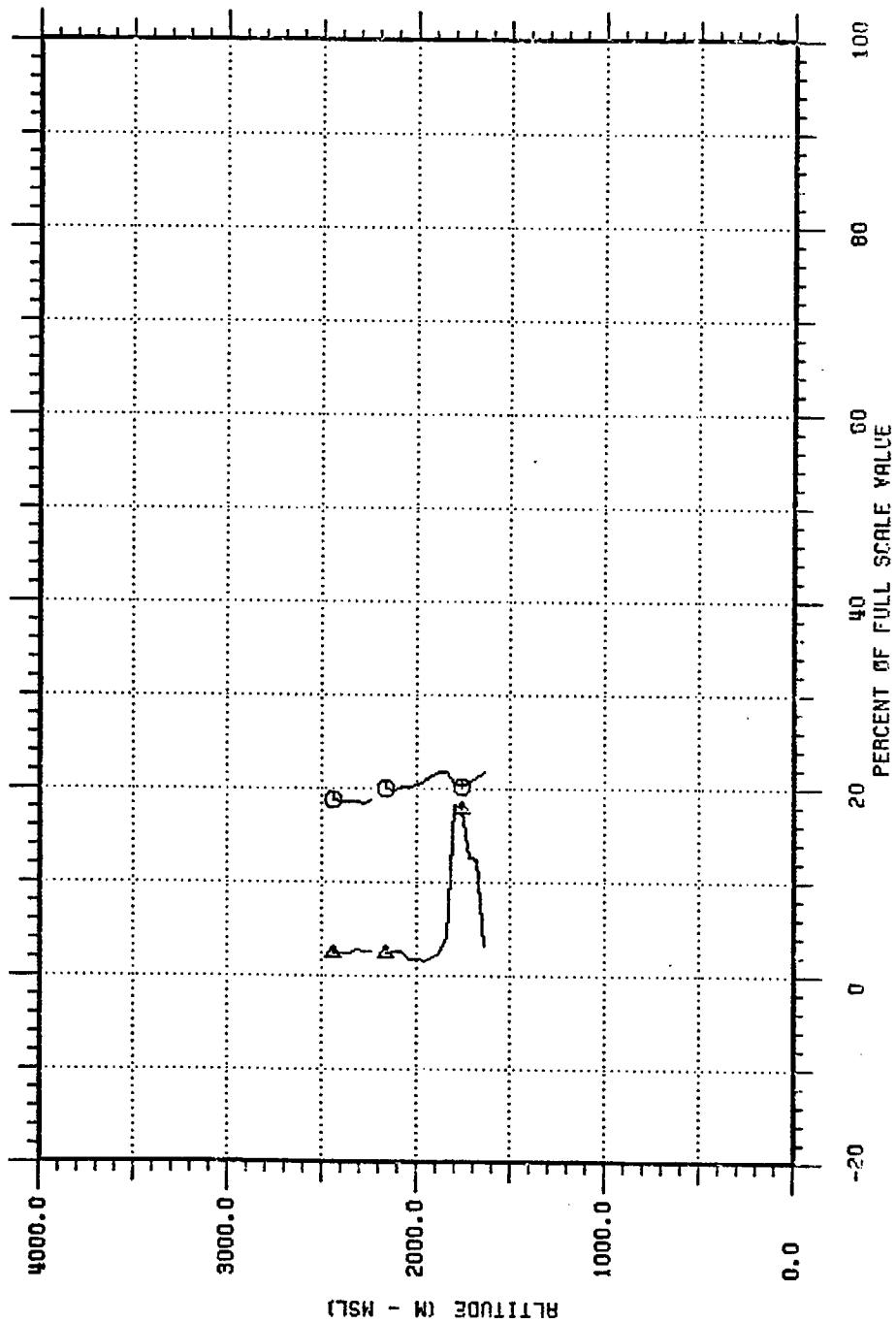
TAPE/PASS: 251/1 DATE: 7 /9 /81
TIME: 1542 TO 1559 (PDT)



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23:00:23

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SPIRAL AT POINT 2

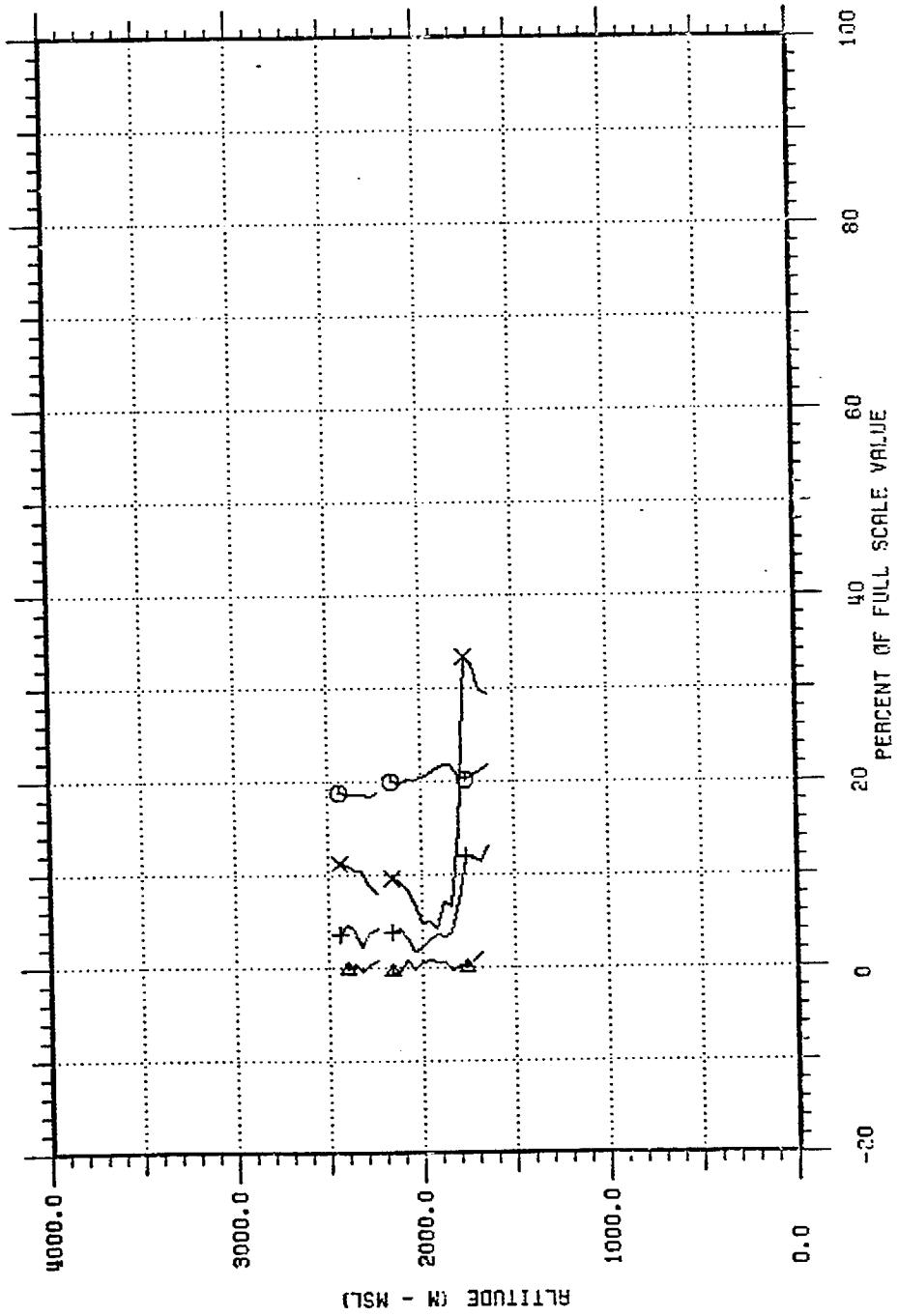
TAPE/PASS: 251/2 DATE: 7 /9 /81
TIME: 1602 TO 1608 (PDT)



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23:00:25

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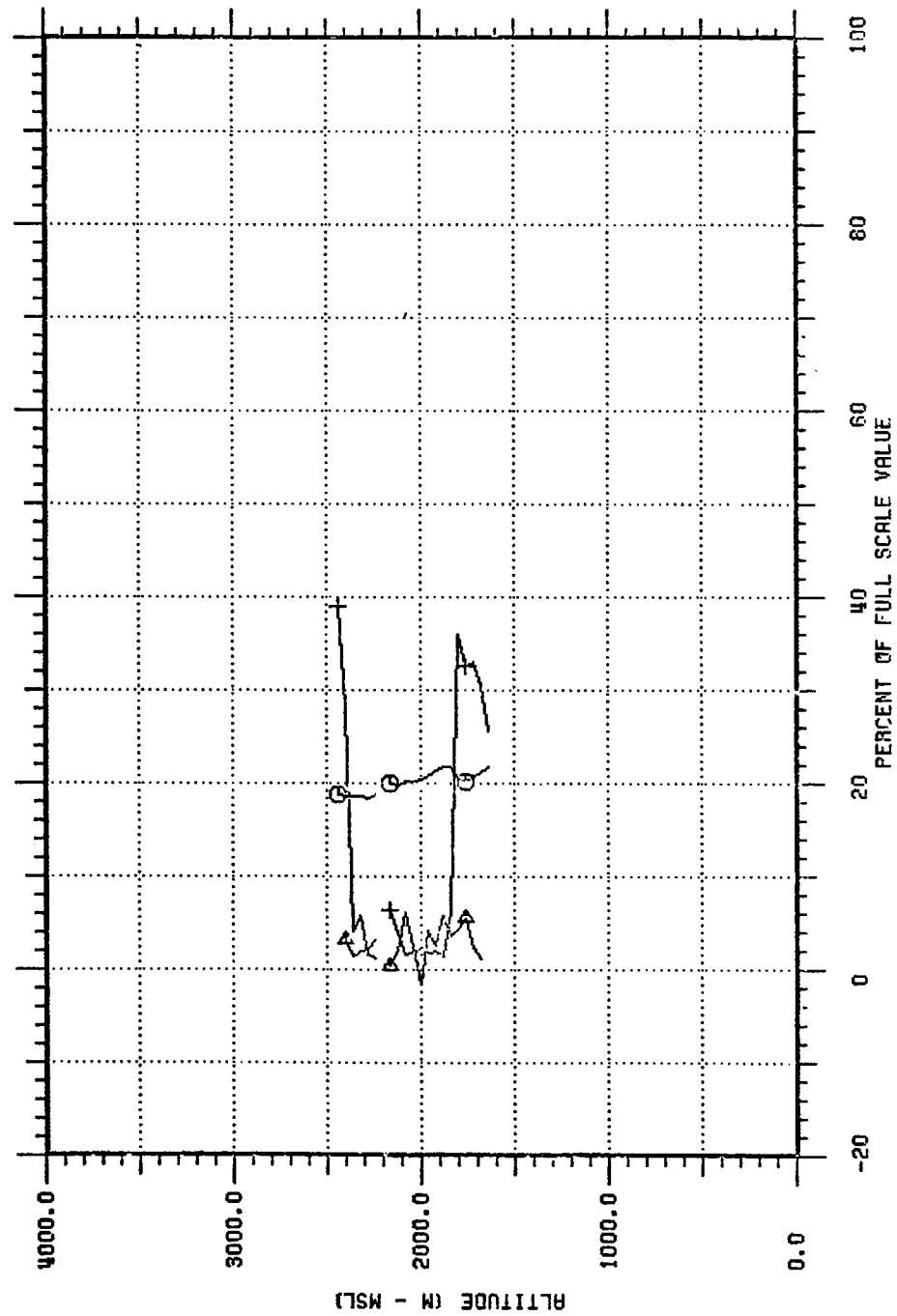
TAPE/PASS: 251/2 DATE: 7 / 9 /81
TIME: 1602 TO 1608 (PDT)



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23:00:23

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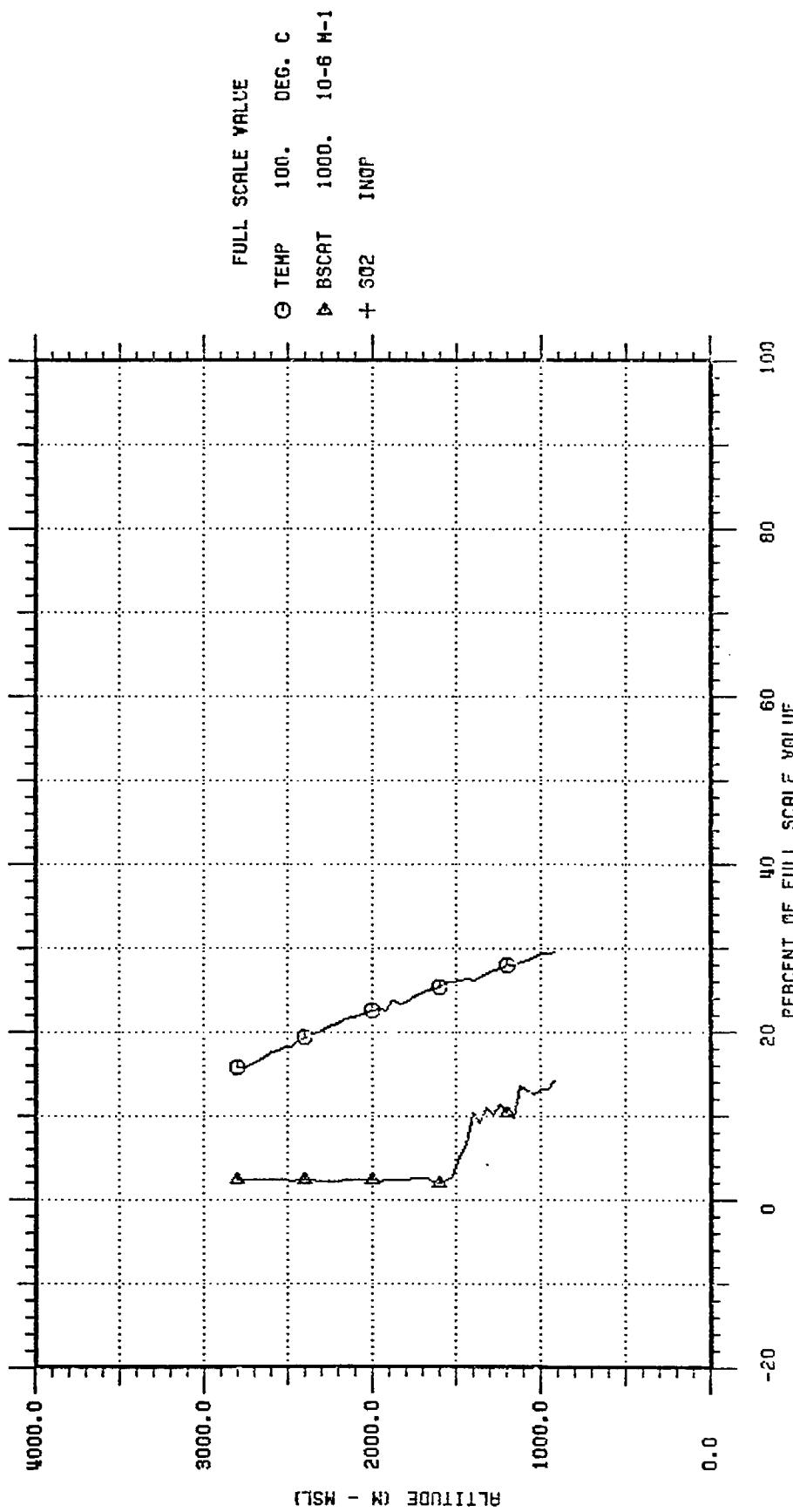
TAPE/PASS: 251/2 DATE: 7 / 9 /81
TIME: 1602 TO 1608 (PDT)



01092A.0
23:00;23

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SPIRAL AT POINT 3

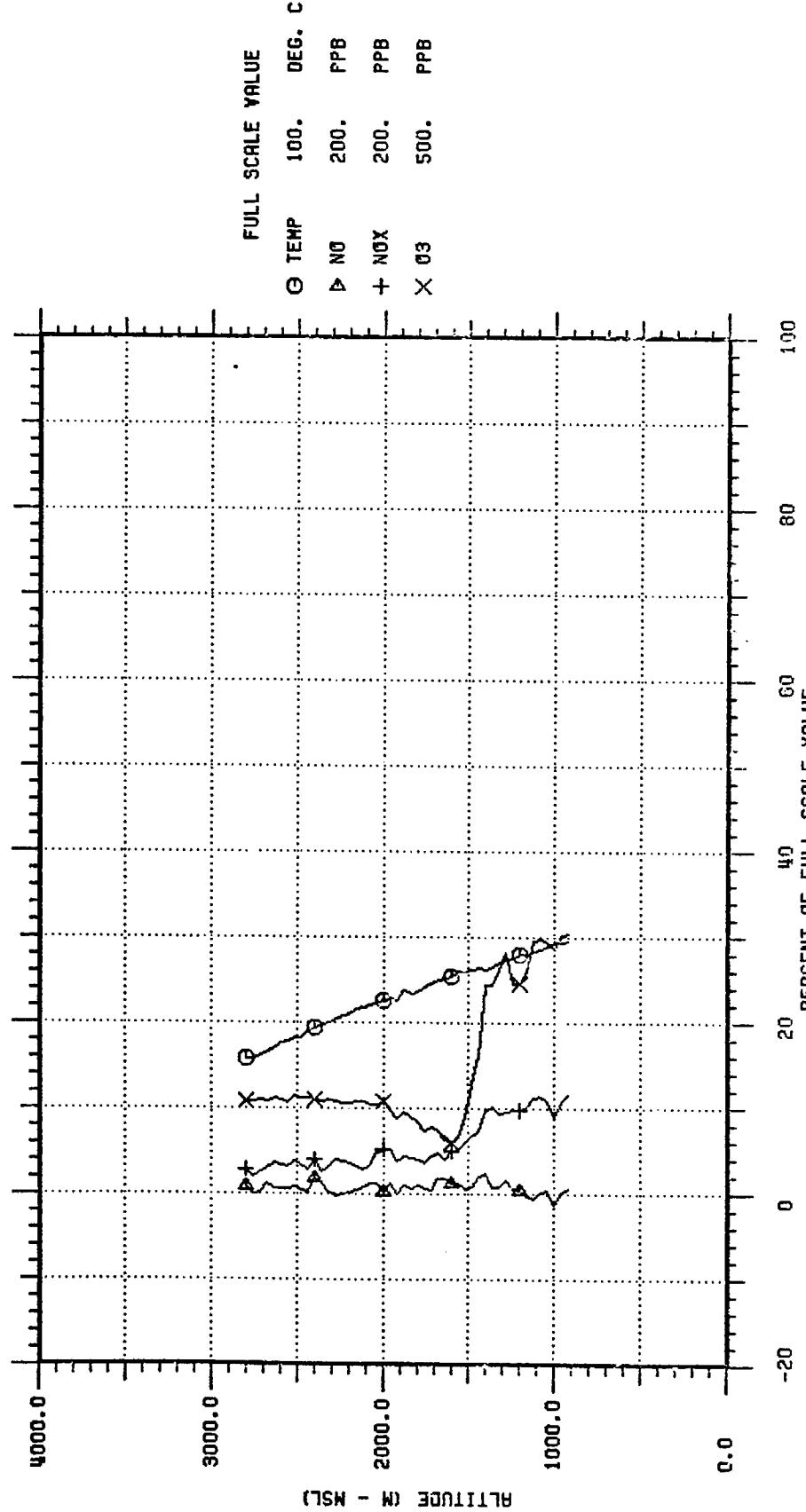
TAPE/PASS: 251/3 DATE: 7 /9 /81
TIME: 1615 TO 1636 (PDT)



810924 9
23:00:23

SED TRANSPORT
SPIRAL AT POINT 3

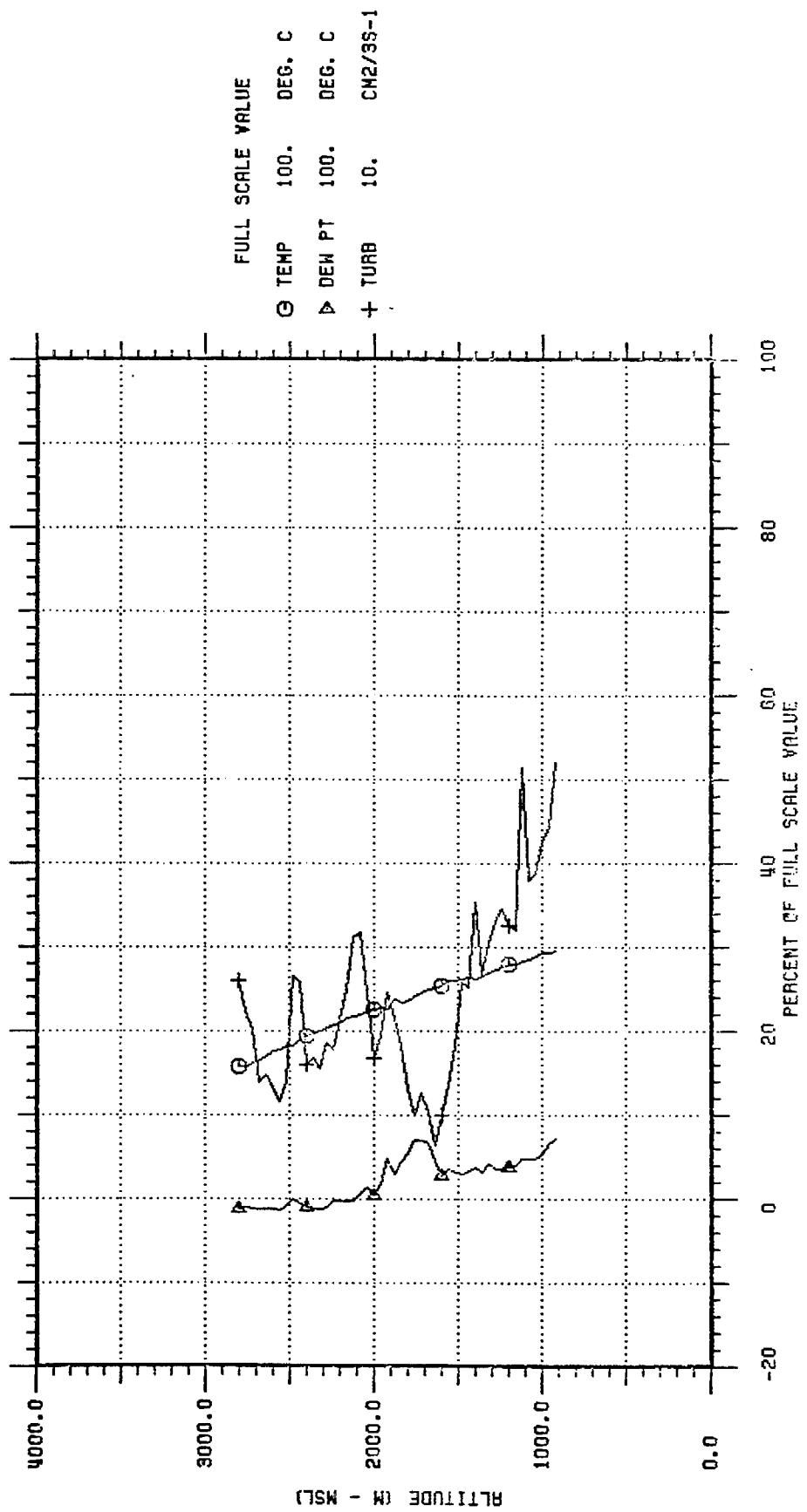
TAPE/PASS: 251/3 DATE: 7/19/81
TIME: 1615 TO 1636 (PDT)



810924.0
23:00:23

SED TRANSPORT
SPIRAL AT POINT 3

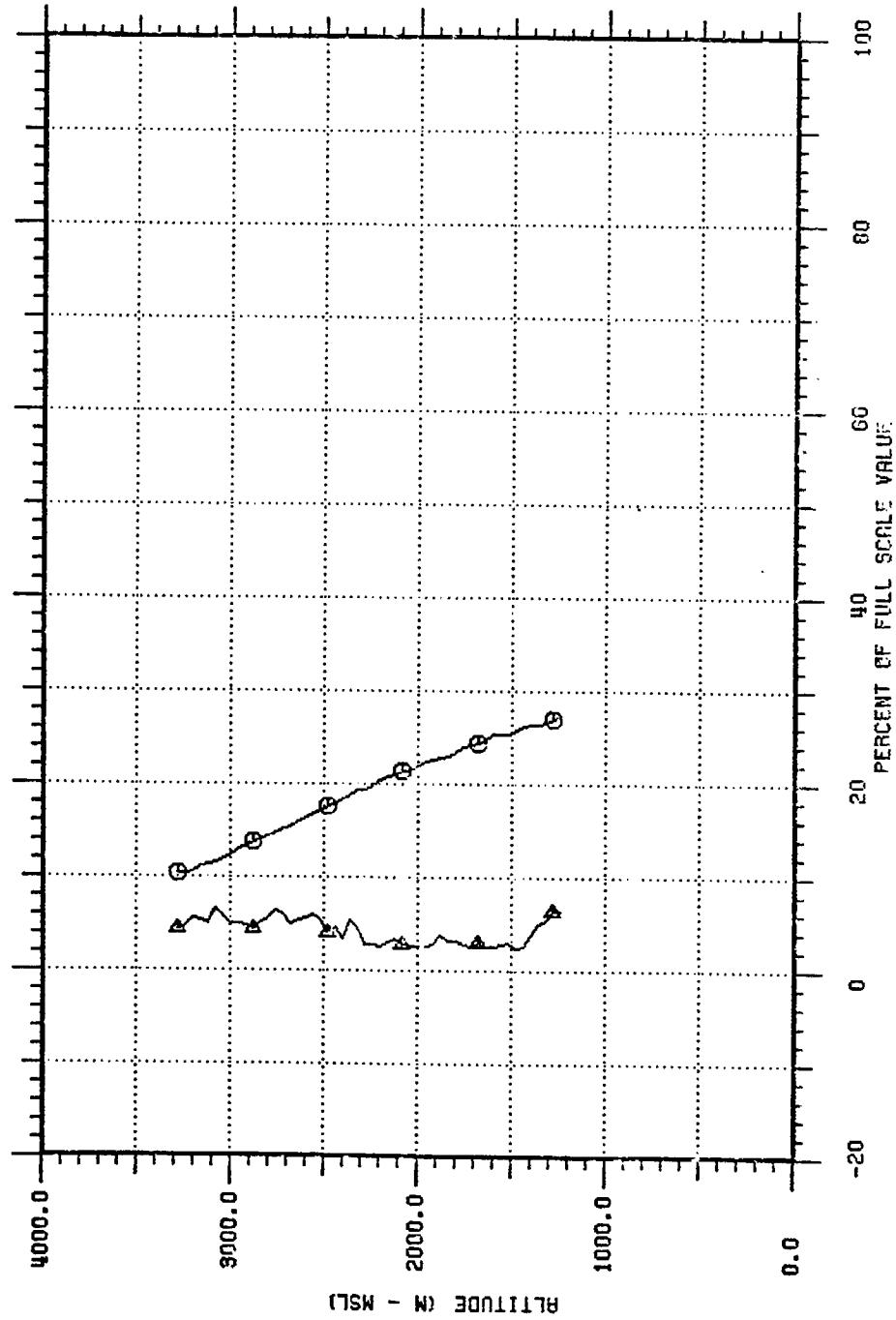
TAPE/FASS: 251/3 DATE: 7/9/81
TIME: 1615 TO 1636 (PDT)



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23:00:23

SED TRANSPORT
SPIRAL AT POINT 4

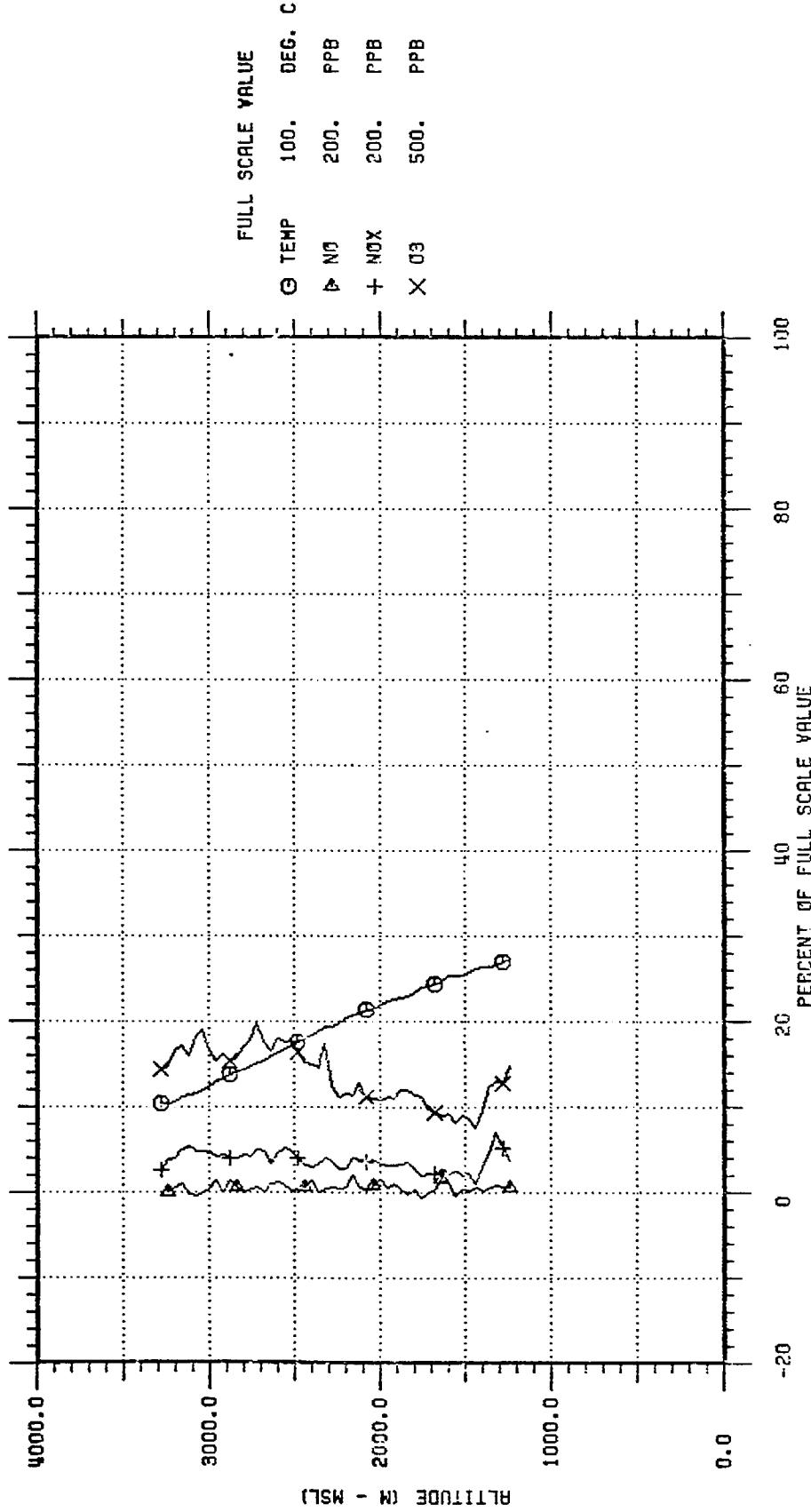
TAPE/PASS: 251/4 DATE: 7 /9 /81
TIME: 1648 10 1703 (PDT)



810924.9
23:01:23

SED TRANSPORT
SPIRAL AT POINT 4

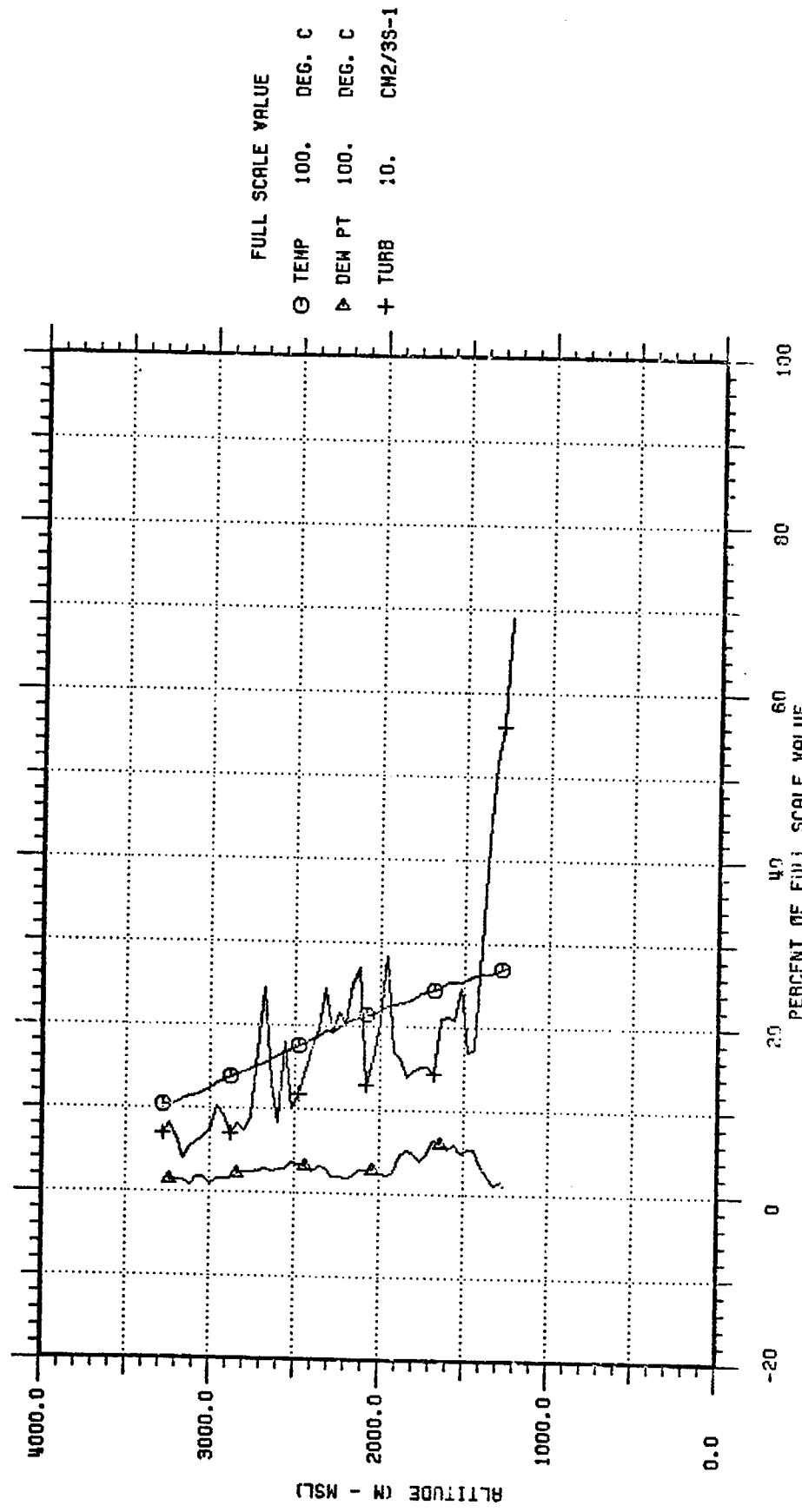
TAPE/PASS: 251/4 DATE: 7 / 9 /81
TIME: 1648 TO 1703 (PDT)



810924.0
23:00:23

**SED TRANSPORT
SPIRAL AT POINT 4**

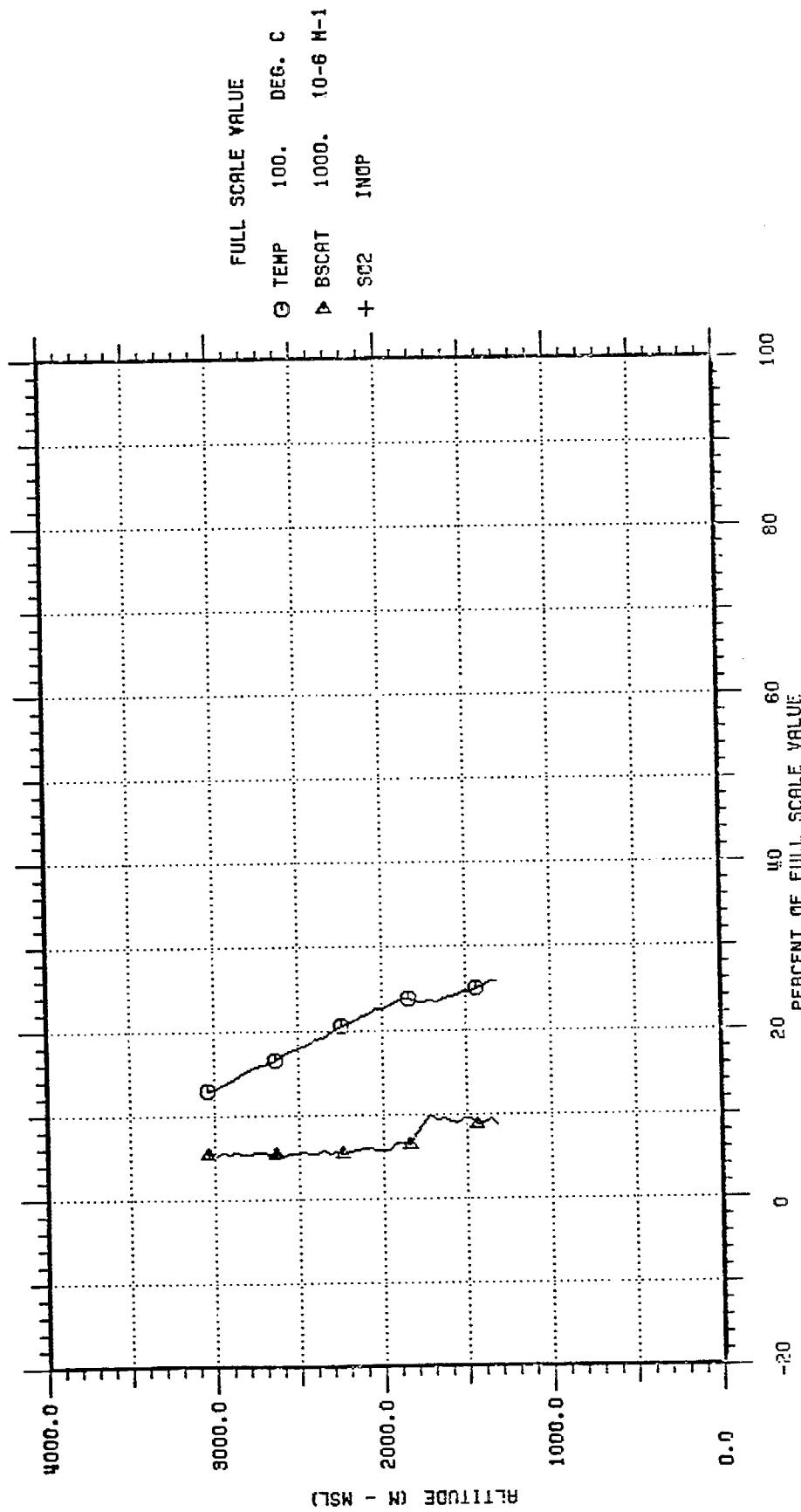
TAPE/PASS: 251/4 DATE: 7 / 9 /81
TIME: 1648 TO 1703 (PDT)



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23:00:23

SED TRANSPORT
SPIRAL AT POINT 5

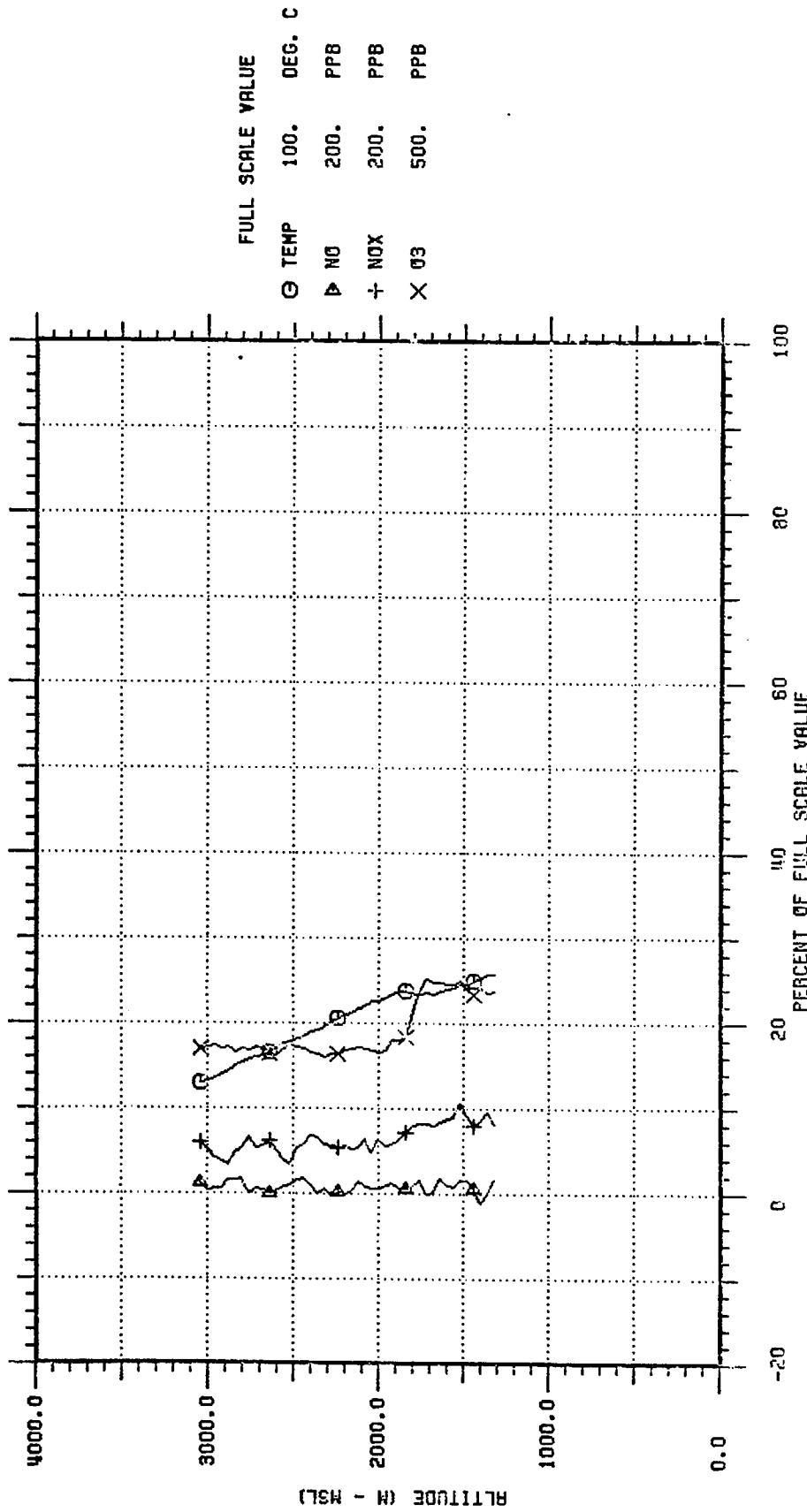
TAPE/PASS: 251/5 DATE: 7 /9 /81
TIME: 1713 TO 1729 (PDT)



310324.0
23:00:23

SED TRANSPORT
SPIRAL AT POINT 5

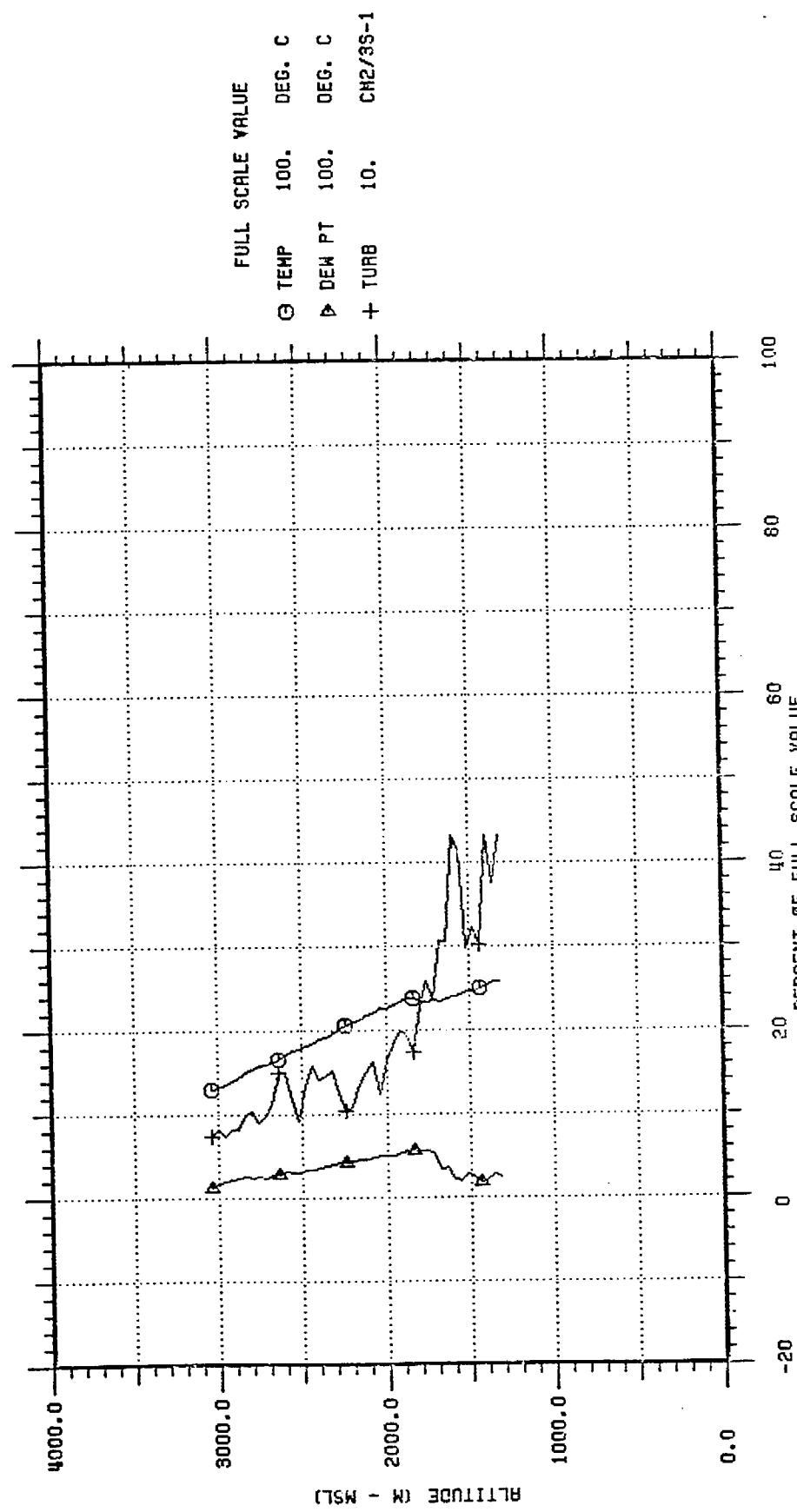
TAPE/PASS: 251/5 DATE: 7 /9 /81
TIME: 1713 TO 1729 (PDT)



810924.0
23:00:23

SED TRANSPORT
SPIRAL AT POINT 5

TAPE/PASS: 251/5 DATE: 7 / 9 /81
TIME: 1713 TO 1729 (RDT)

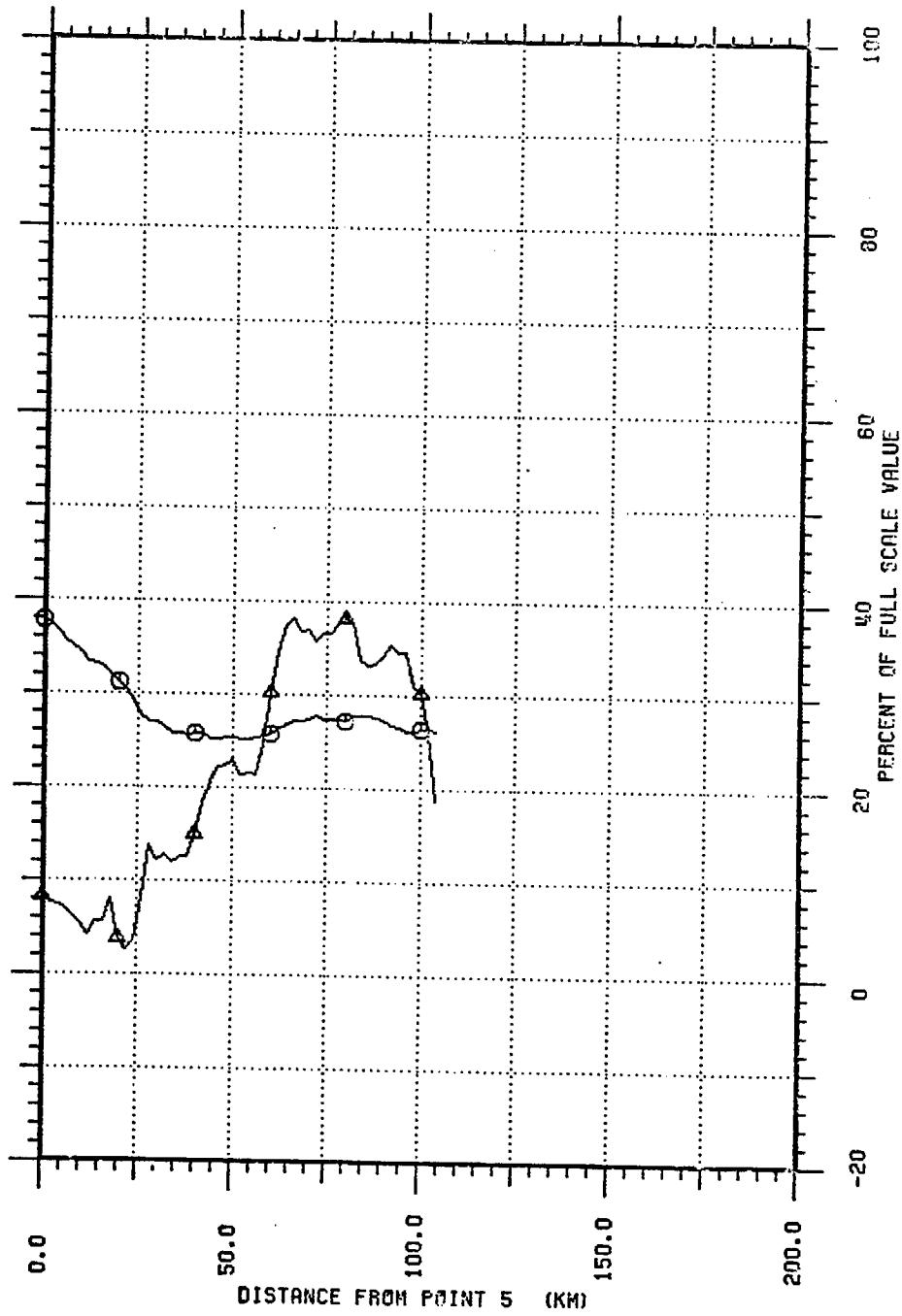


210924.0
23:02:23

SED TRANSPORT

TRAVERSE FROM POINT 5 TO POINT 6 (1524 M MSL)

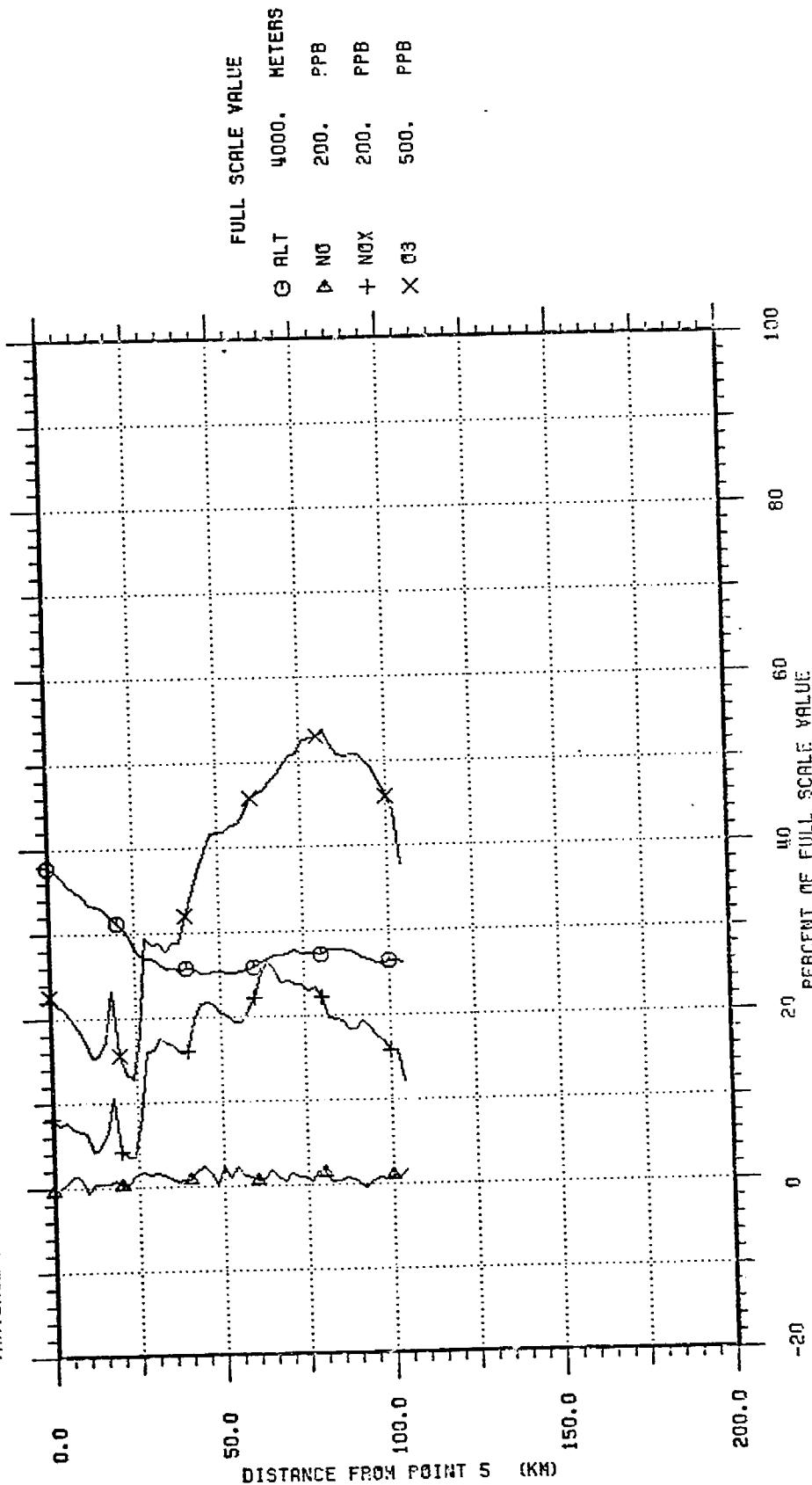
TAPE/PASS: 251/7 DATE: 7 / 9 / 81
TIME: 1739 TO 1808 (PDT)



810924.0
23:42:22

SED TRANSPORT
TRaverse from Point 5 to Point 6 (1524 m MSL)

TAPE/PASS: 251/7 DATE: 7 / 9 / 81
TIME: 1739 TO 1808 (PDT)



810924.0
23:42:22

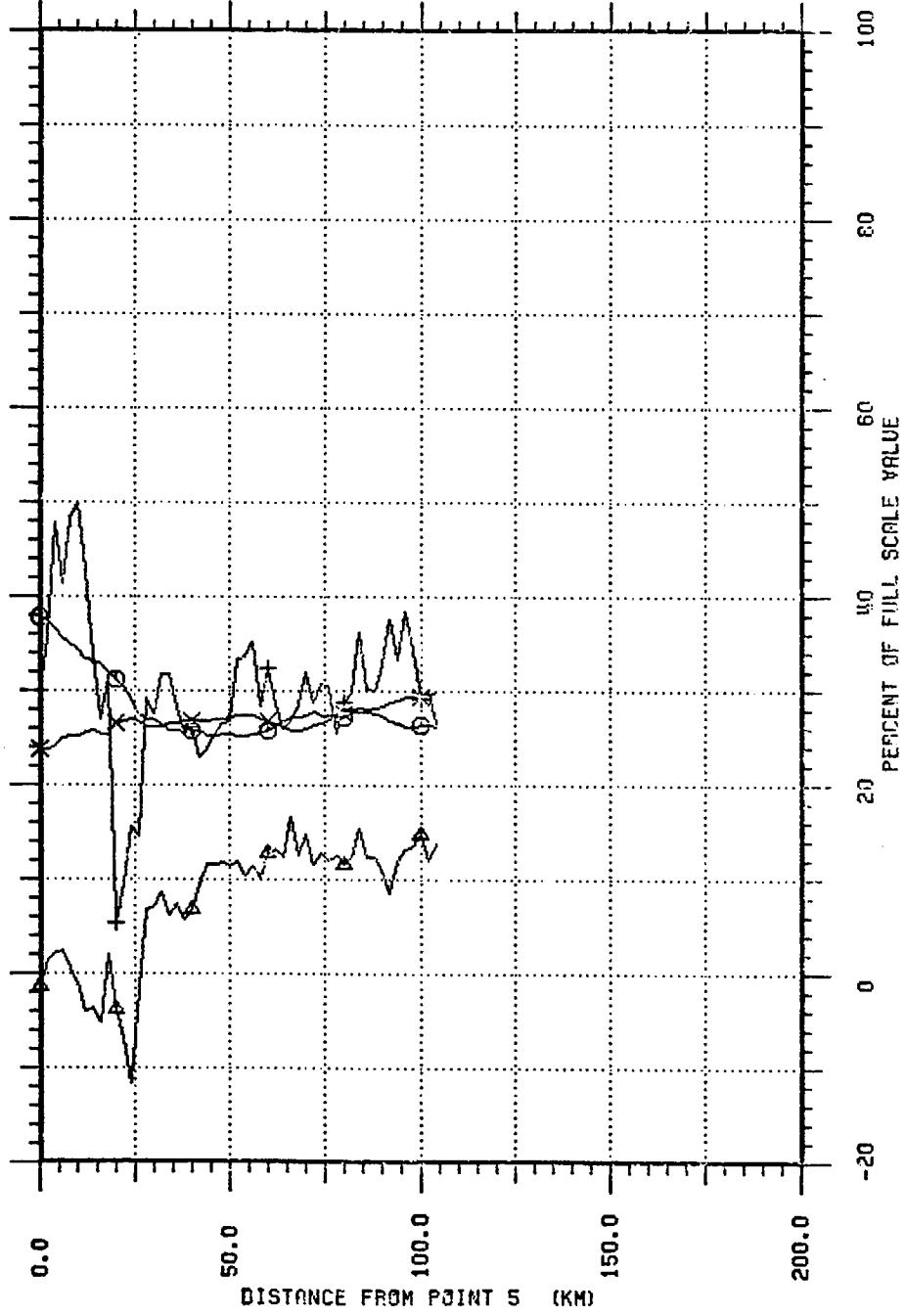
SED TRANSPORT

TRaverse from POINT 5 TO POINT 6 (11524 M MSL)

TAPE/PASS: 251/7

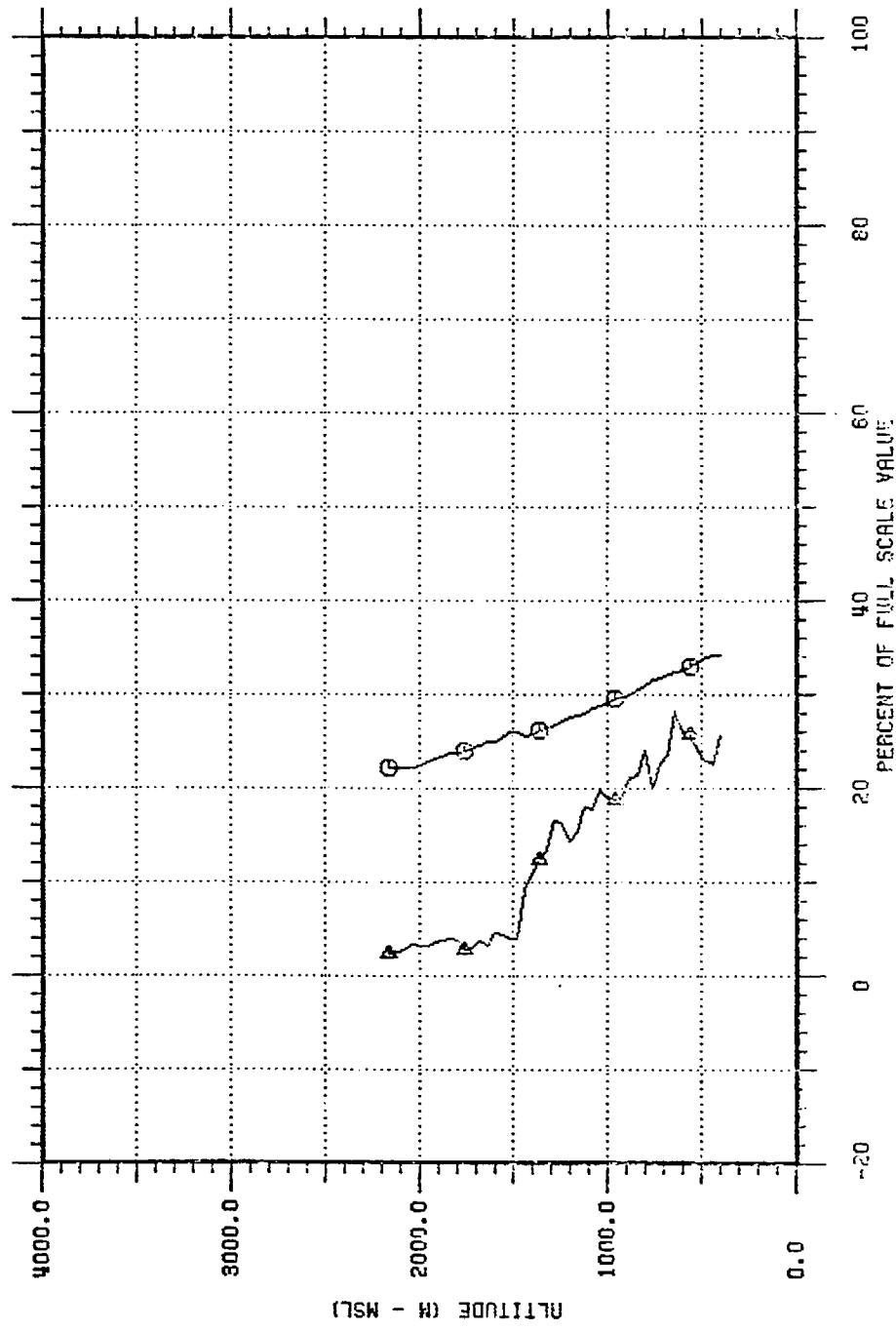
TIME: 1739 TO 1808 (PDT)

DATE: 7/9/81



SED TRANSPORT
SPIRAL AT POINT 6

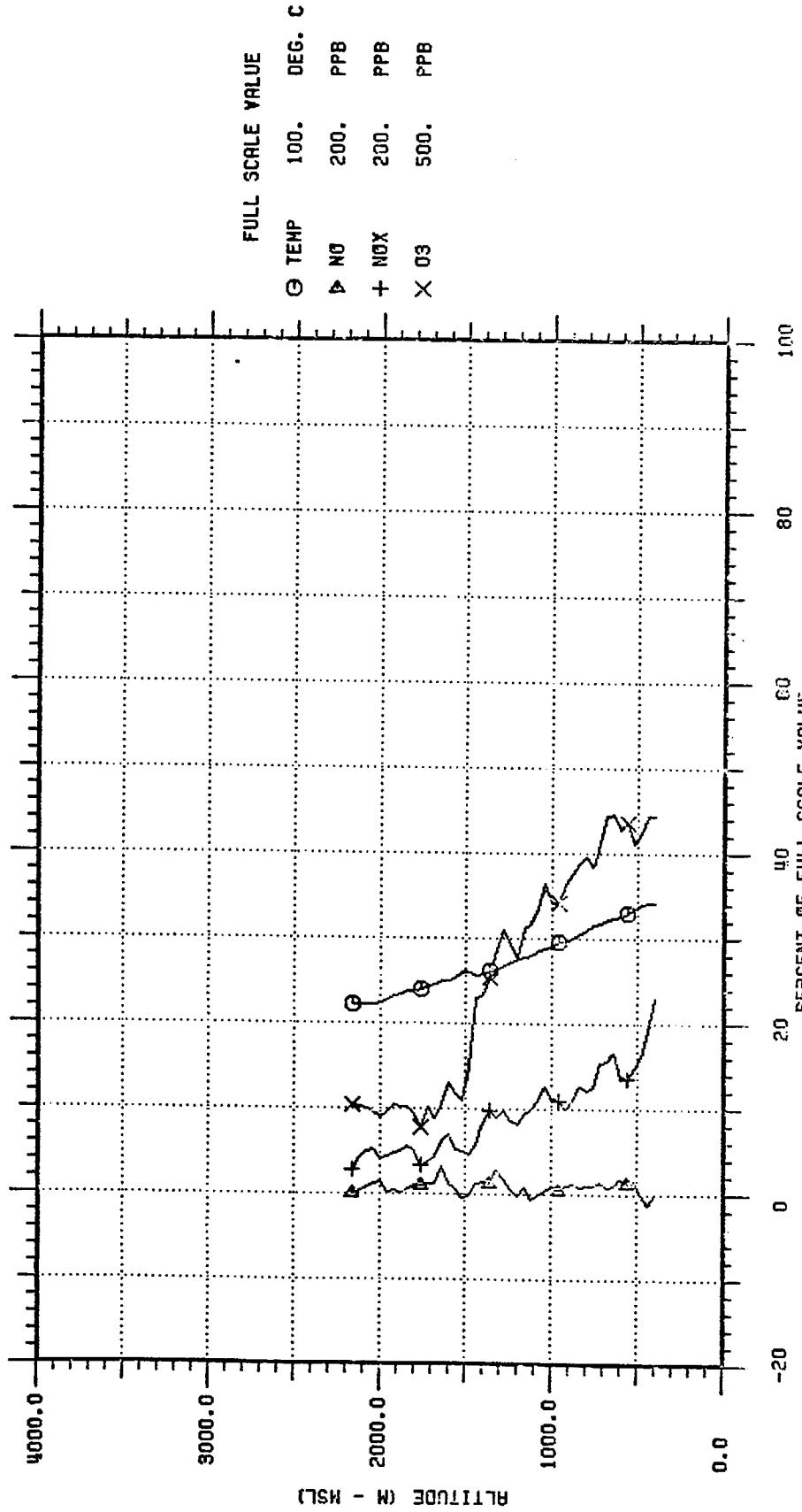
TAPE/PAGE: 251/8 DATE: 7 /9 /81
TIME: 1809 TO 1824 (PDT)



810924 9
23.00122

SED TRANSPORT
SPIRAL AT POINT 6

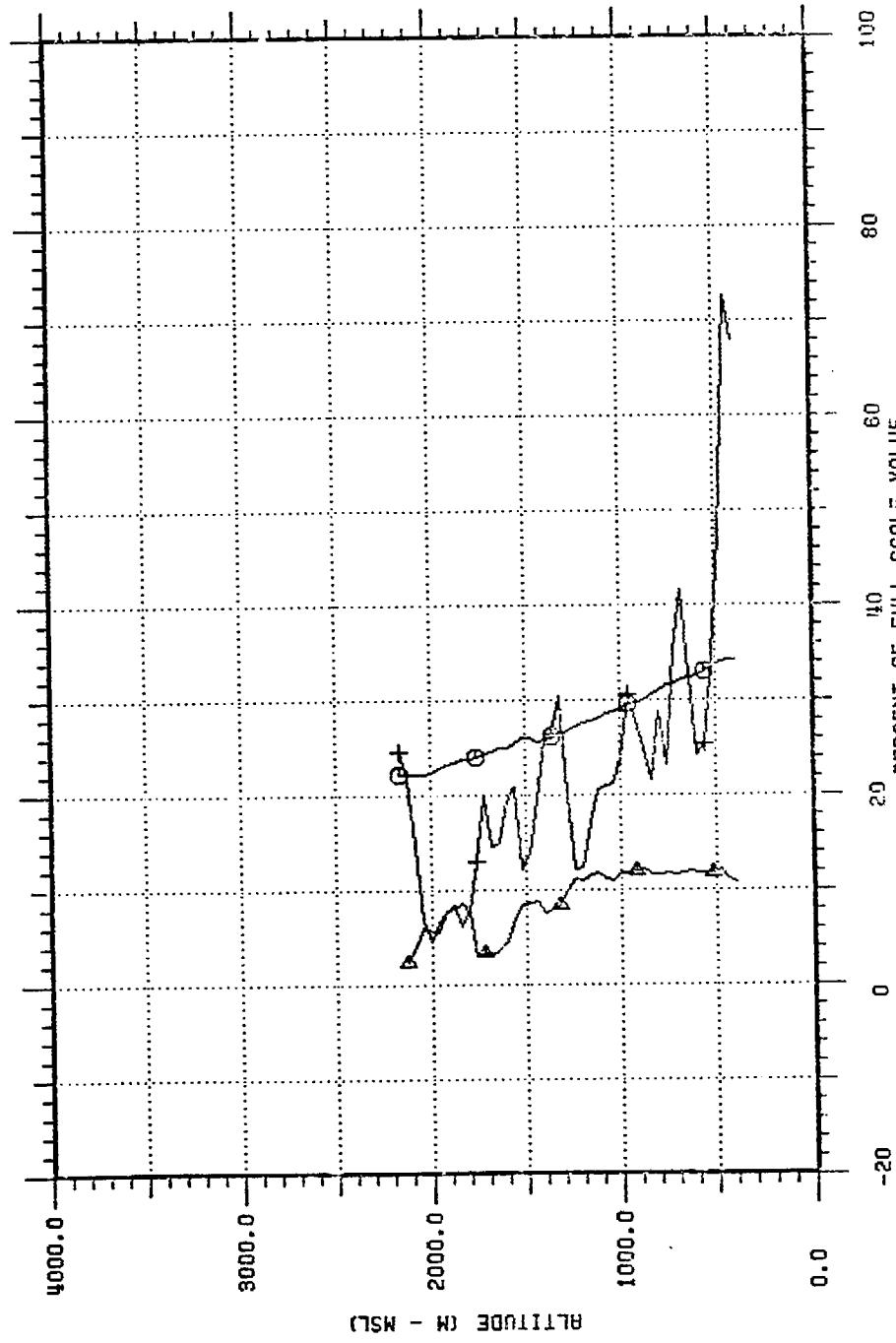
TAPE/PASS: 251/6 DATE: 7/9/81
TIME: 1809 TO 1924 (PDT)



810924:0
23:00:23

SED TRANSPORT
SPIRAL AT POINT 6

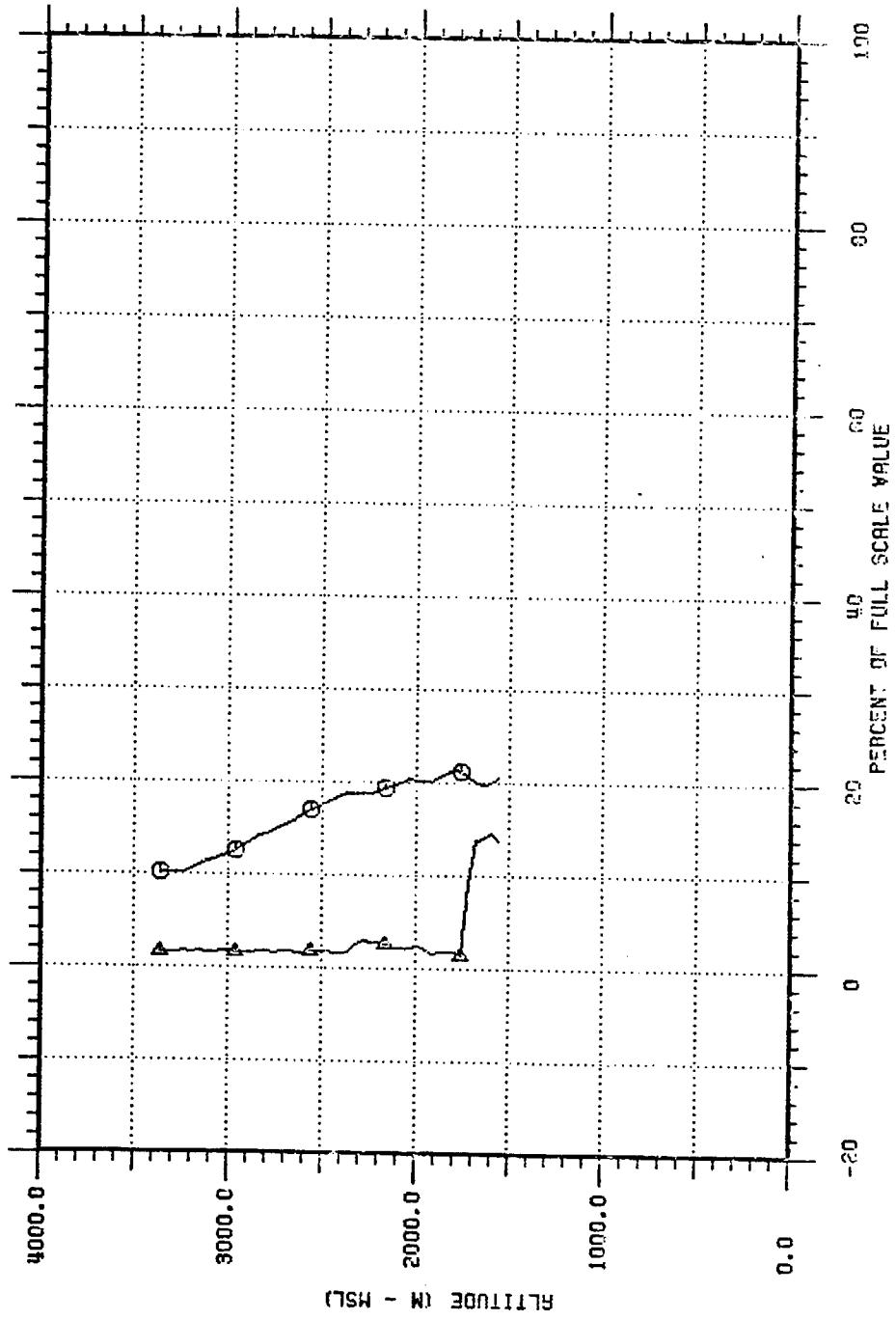
TAPE/PASS: 251/8 DATE: 7 / 9 / 81
TIME: 1809 TO 1824 (PDT)



810824,0
23:00-23

SED TRANSPORT
SPIRAL AT POINT 7

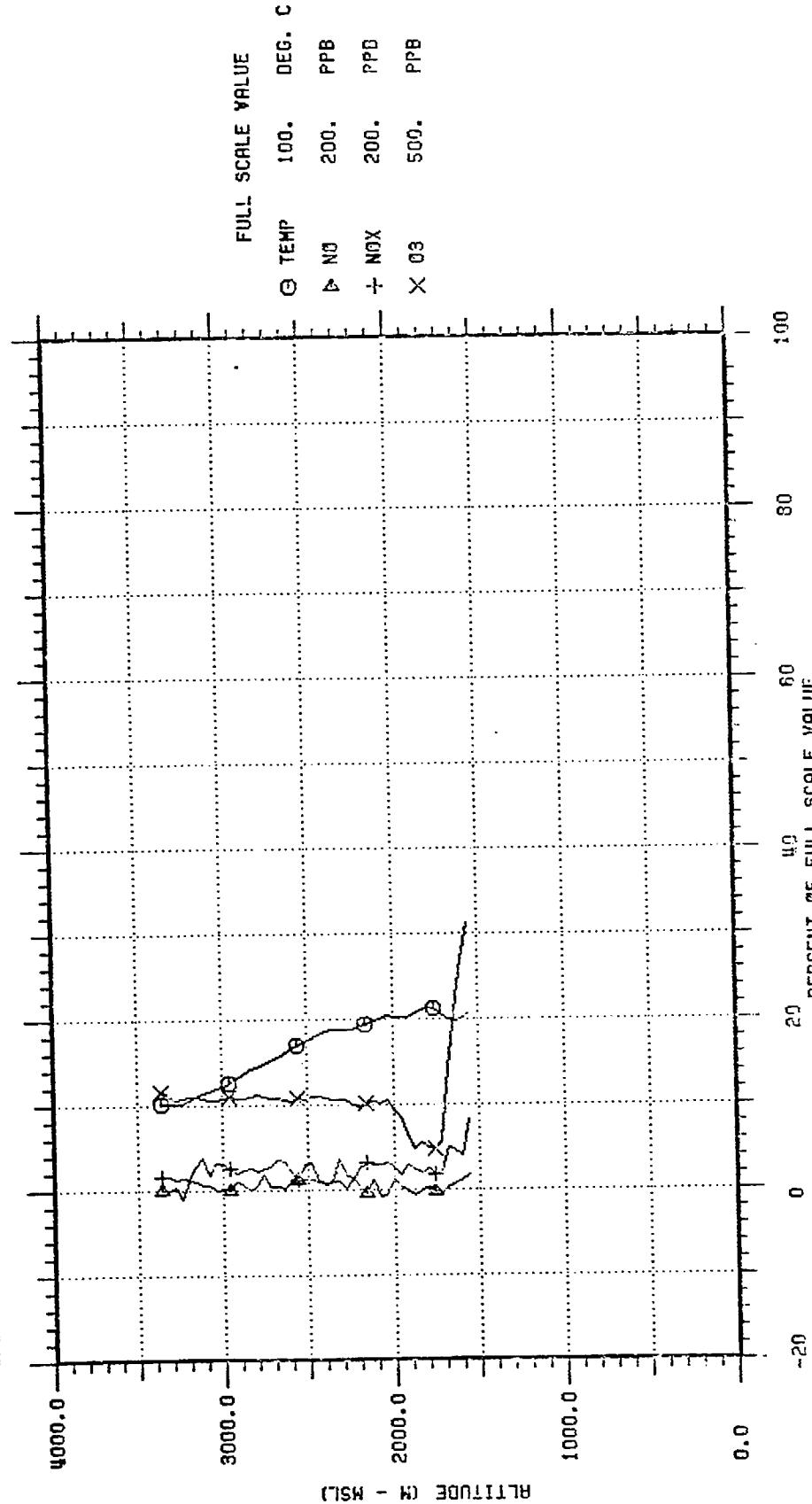
TAPE/PASS: 251/9 DATE: 7 /9 /81
TIME: 1843 TO 1851 (PDT)



E10324.0
23:50:23

**SED TRANSPORT
SPIRAL AT POINT 7**

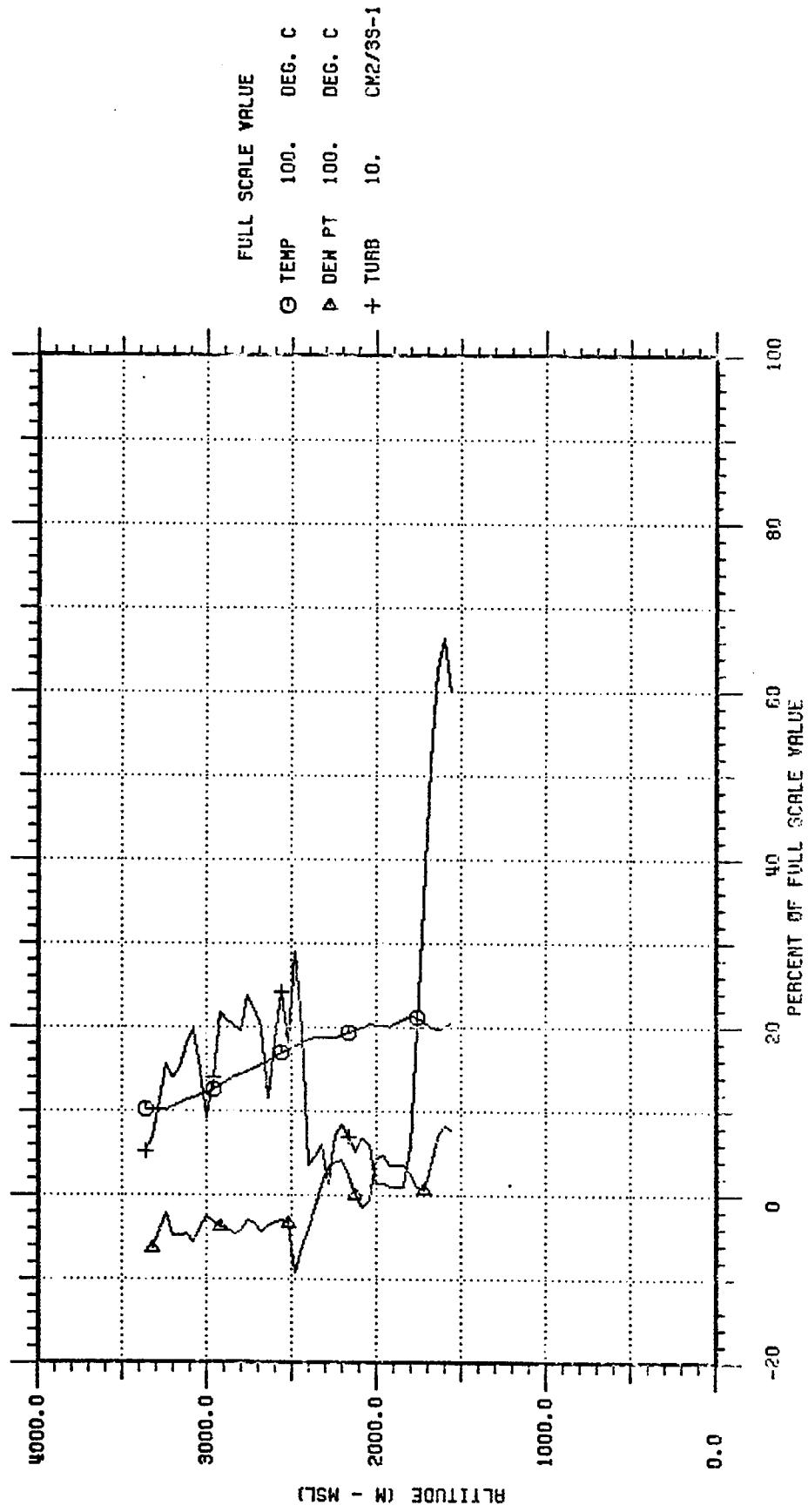
TAPE/PASS: 251/9 DATE: 7 /9 /81
TIME: 1843 TO 1851 (PDT)



817924.0
23:00:23

SED TRANSPORT
SPIRAL PT POINT 7

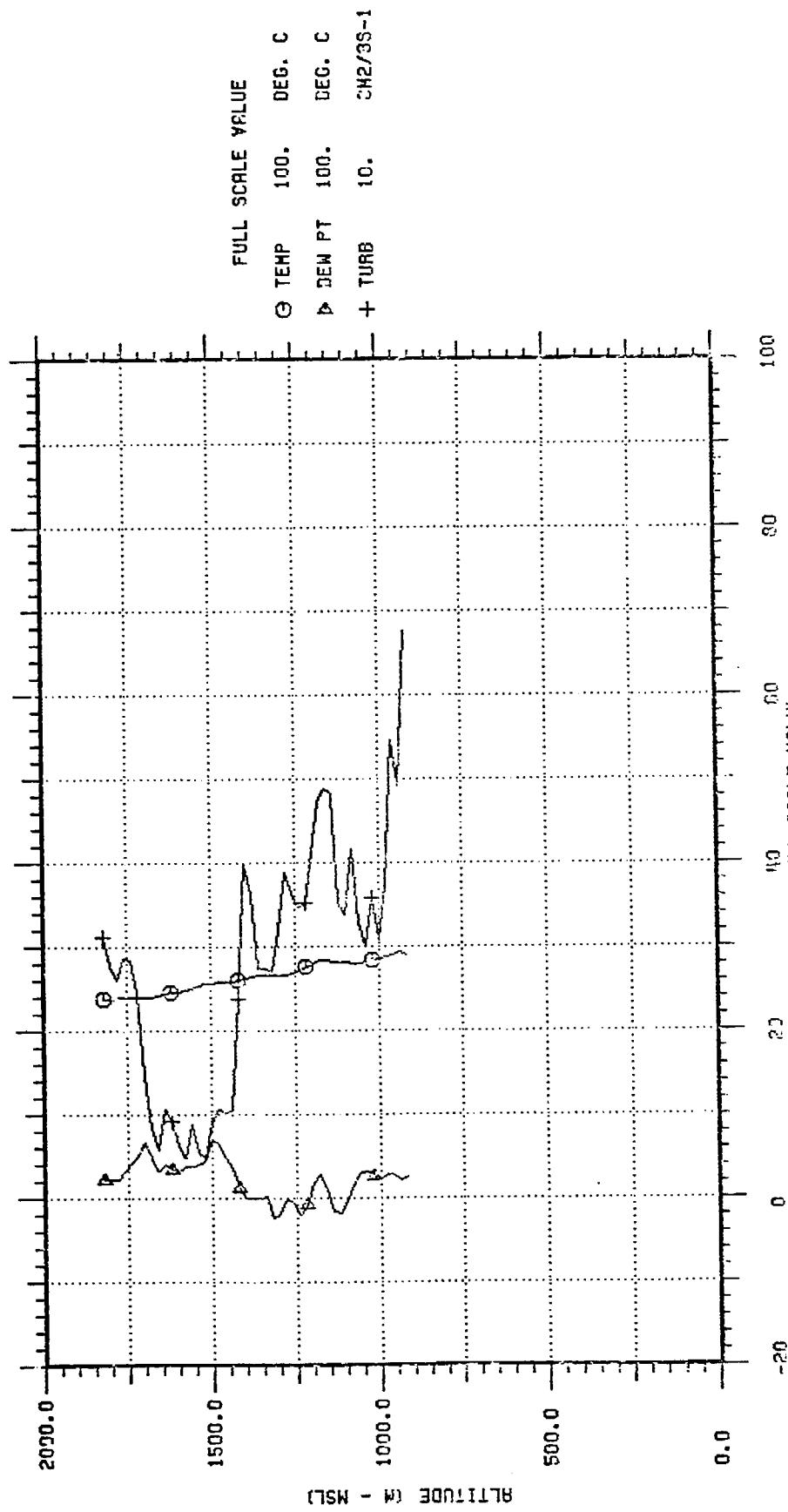
TAPE/PASS: 251/9 DATE: 7 / 9 /81
TIME: 1843 TO 1851 (PDT)



310824.0
23:00:23

SED TRANSPORT
SPIRAL AT POINT 3

TAPE/PASS: 251/10 DATE: 7 / 9 /81
TIME: 1854 TO 1901 (PDT)



810024.0
23:06:23

TEST 2 - JULY 14-15, 1981

Date: July 14, 1981

MRI FLIGHT SUMMARY

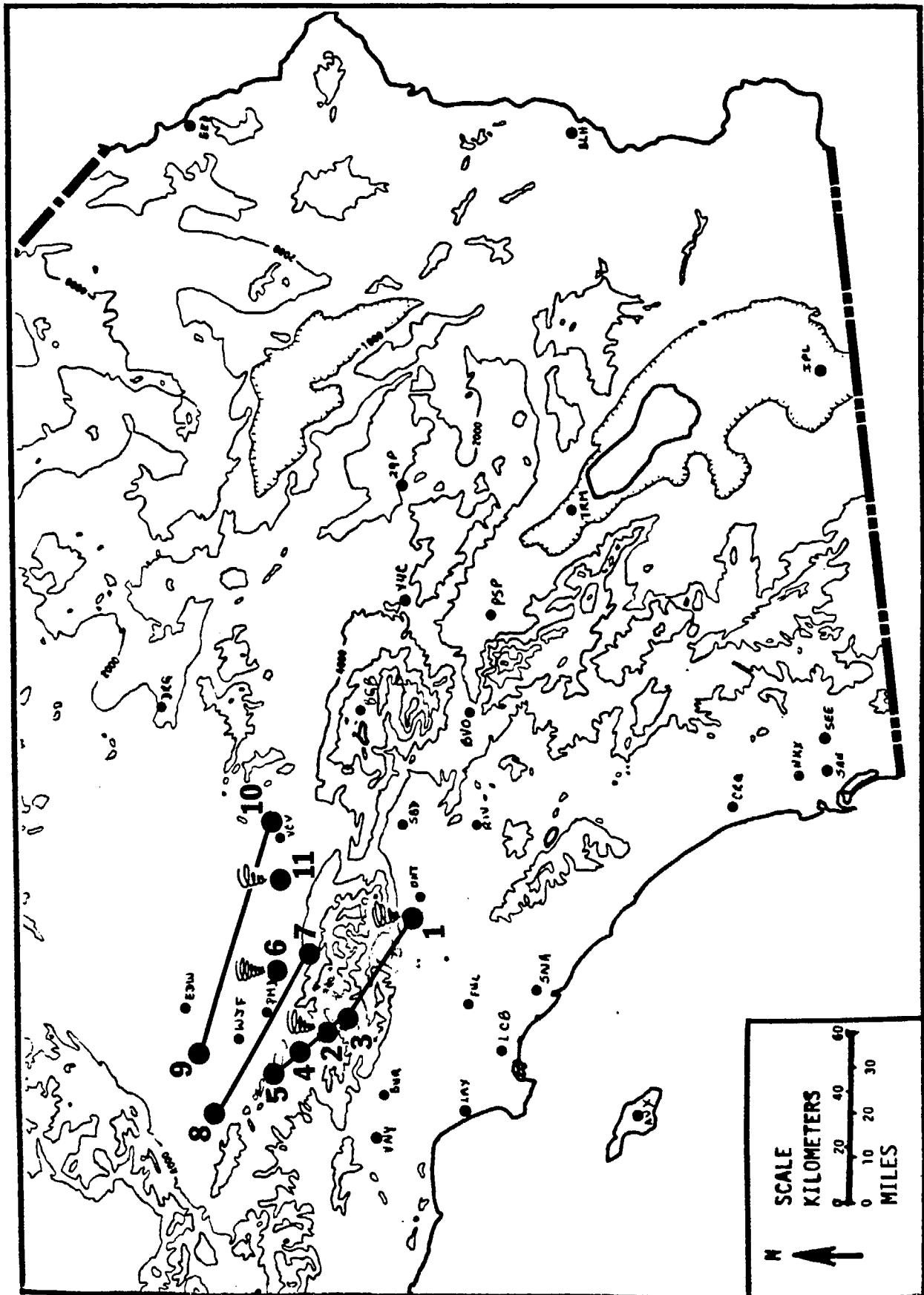
SOUTHEAST DESERT OZONE TRANSPORT STUDY

Tape #: 252

Pass No.	Sampling Start (PDT)	Sampling Times (PDT)	Flight End	Flight Type	End Points	Sampling Start	Altitude m MSL	Traverse Length or Orbit Time	Tracer Samples	Comments
1	1535	1552	Spiral	1		442-2134	N.A.	B1-12		Sfc Elev = 442 m
2	1553	1612	Traverse	1 - 2		2134		61.2 Km.		
3	1627	1644	Spiral	2		3353-	853	N.A.	B13-29	Sfc Elev = 832 m
4	1647	1651	Traverse	3 - 4		1219		11.6 Km.	B30-36	Sampling in
5	1659	1706	Traverse	3 - 5		1676		21.1 Km.	B37-50	Soledad Canyon
6	1713	1720	Traverse	5 - 3		2134		21.1 Km.	B51-69	
7	1740	1802	Spiral	6		3353-	792	N.A.	B70-86	Sfc Elev = 777 m
8	1811	1825	Traverse	7 - 8		1676		46.9 Km.	B87-101	
9	1832	1856	Traverse	9 - 10		1676		89.8 Km.	B102-126	
10	1903	1911	Spiral	11		945-1981		N.A.	B127-134	Sfc Elev = 938 m
11	1921	1930	Zero Spiral			1890- 442		N.A.	0	Instrument calibration

14 July 1981 Tape #252
 TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°06.2'	117°37.3'	Cable Airport
2	34°28.4'	118°12.0'	Acton
3	34°26.5'	118°10.5'	South end of Soledad Canyon
4	34°32.0'	118°13.2'	North end of Soledad Canyon
5	34°36.8'	118°16.0'	
6	34°34.6'	118°02.8'	5 miles west of Palmdale
7	34°31.5'	117°59.0'	Little Rock
8	34°44.2'	118°25.5'	Fairmont
9	34°52.3'	118°12.8'	Rosemond Airport
10	34°33.0'	117°18.0'	Victorville
11	34°32.6'	117°27.3'	Adelanto Airport



SOUTHEAST DESERT OZONE TRANSPORT STUDY

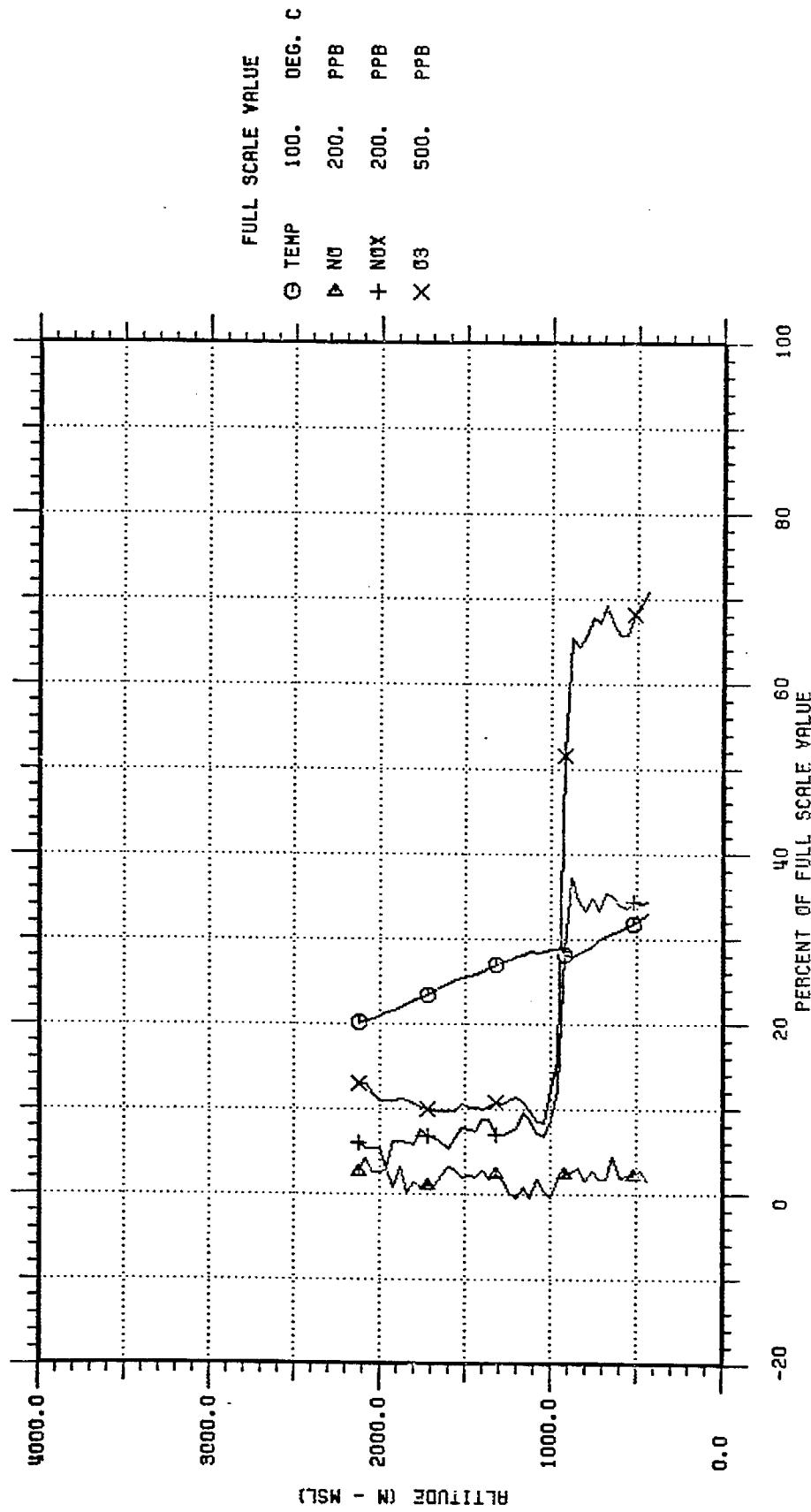
MRI SAMPLING FLIGHT

July 14, 1981

Tape #252

SED TRANSPORT
SPIRAL AT POINT 1

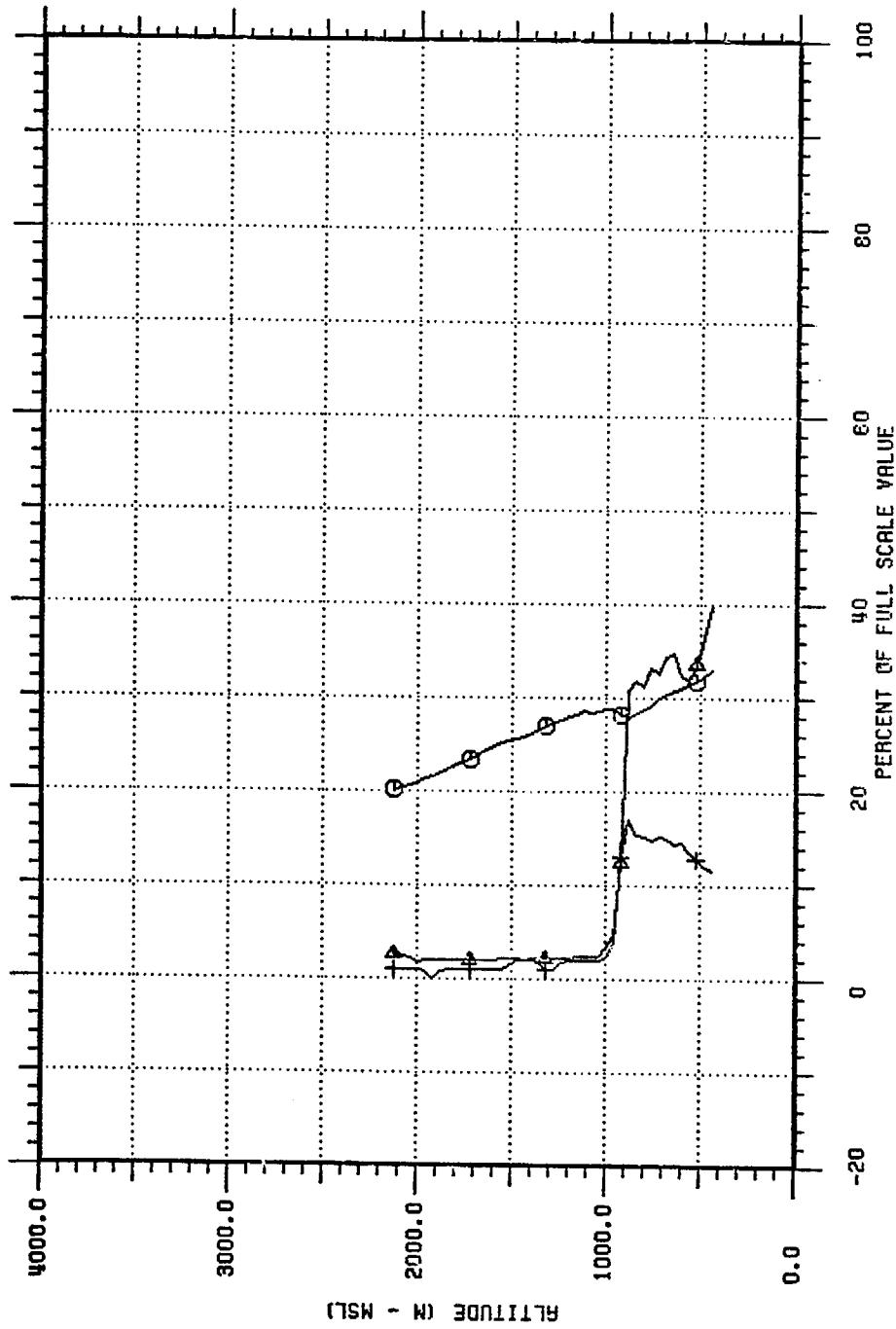
TAPE/PASS: 252/1 DATE: 7/14/81
TIME: 1535 TO 1552 (PDT)



8000325.1
02:12:08

SED TRANSPORT
SPIRAL AT POINT 1

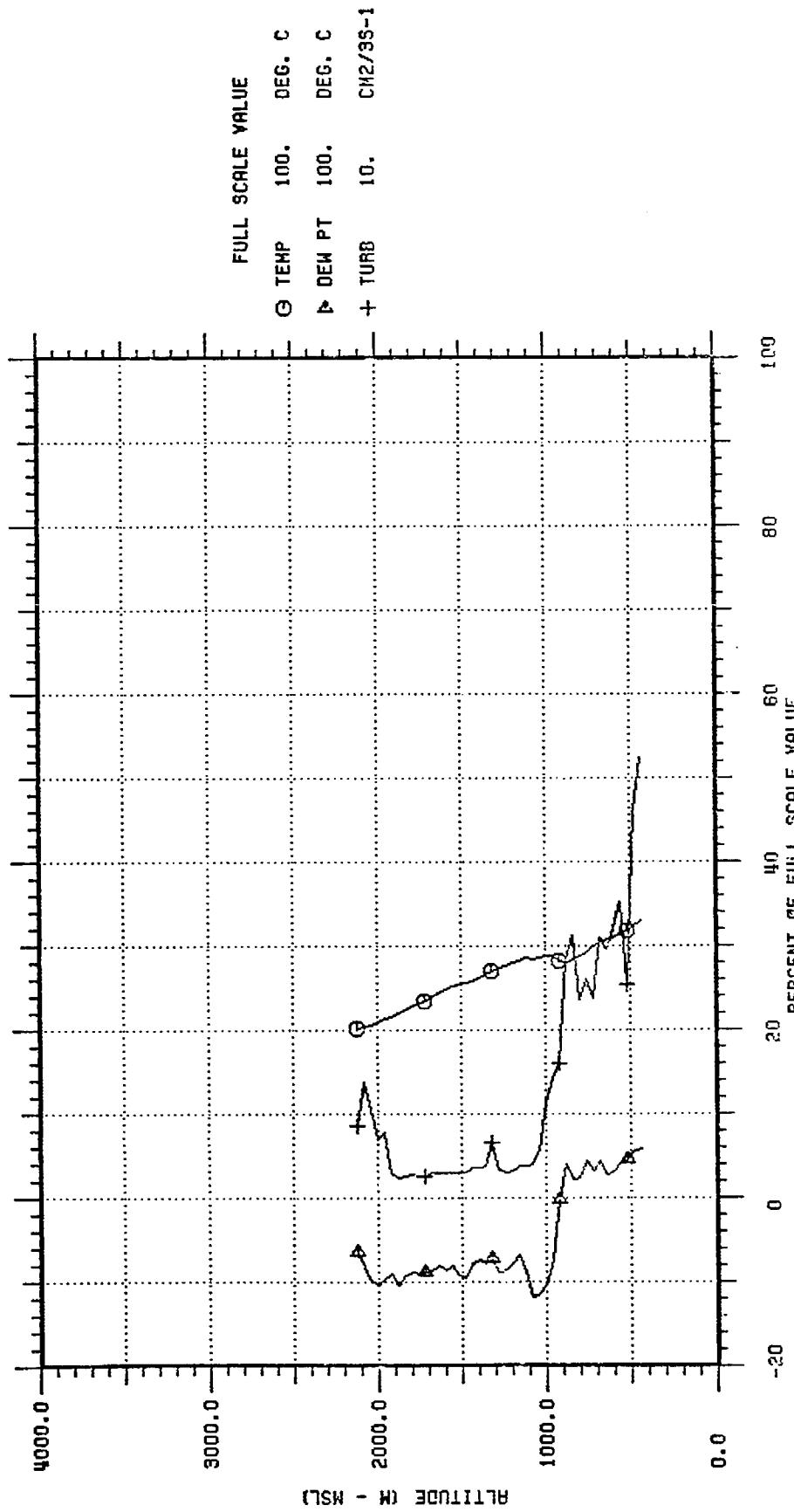
TAPE/PASS: 252/1 DATE: 7/14/81
TIME: 1535 10 1552 (PDT)



800925.1
02:12:03

SED TRANSPORT
SPIRAL AT POINT 1

TAPE/PASS: 252/1 DATE: 7 /14/81
TIME: 1535 TO 1552 (PDT)

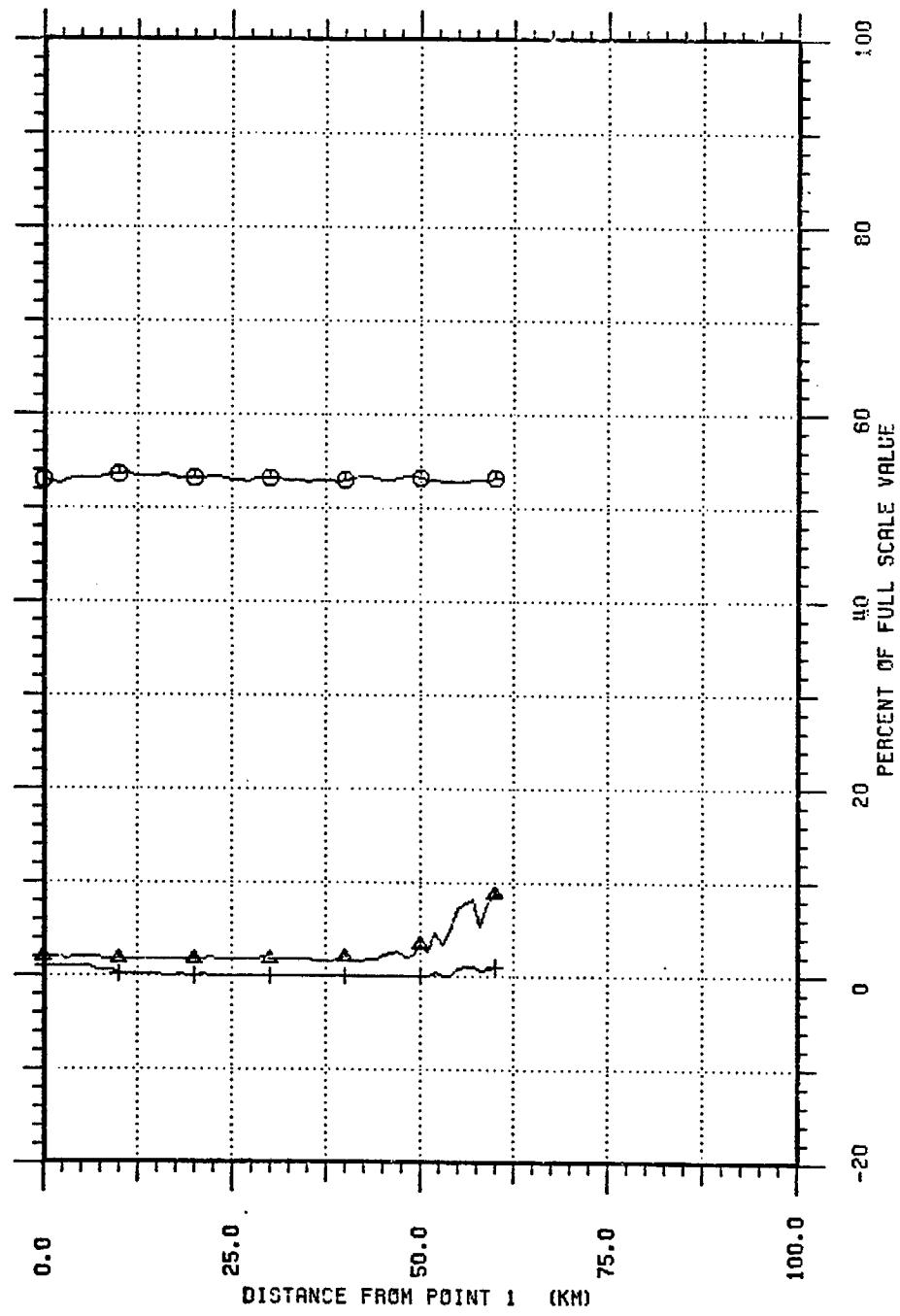


800965.1
02:12:03

SED TRANSPORT

TRaverse from POINT 1 TO POINT 2 (2134 M MSL)

TAPE/PASS: 252/2 DATE: 7/14/81
TIME: 1553 TO 1612 (PDT)



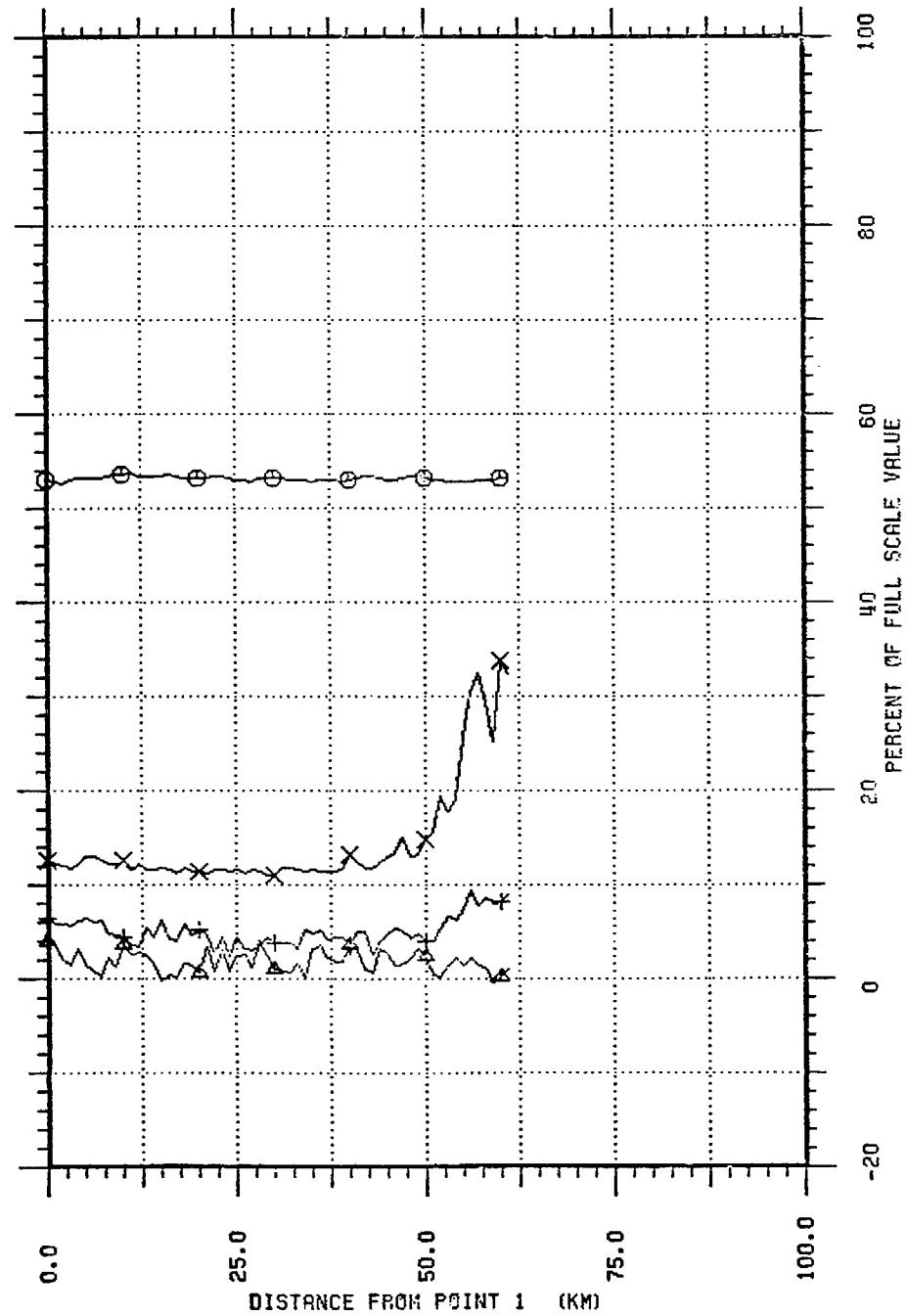
800925.1
02:36:58

SED TRANSPORT

TRAVERSE FROM POINT 1 TO POINT 2 (2134 M MSL)

TAPE/PASS: 252/2 TIME: 1553 TO 1612 (PDT)

DATE: 7/14/81

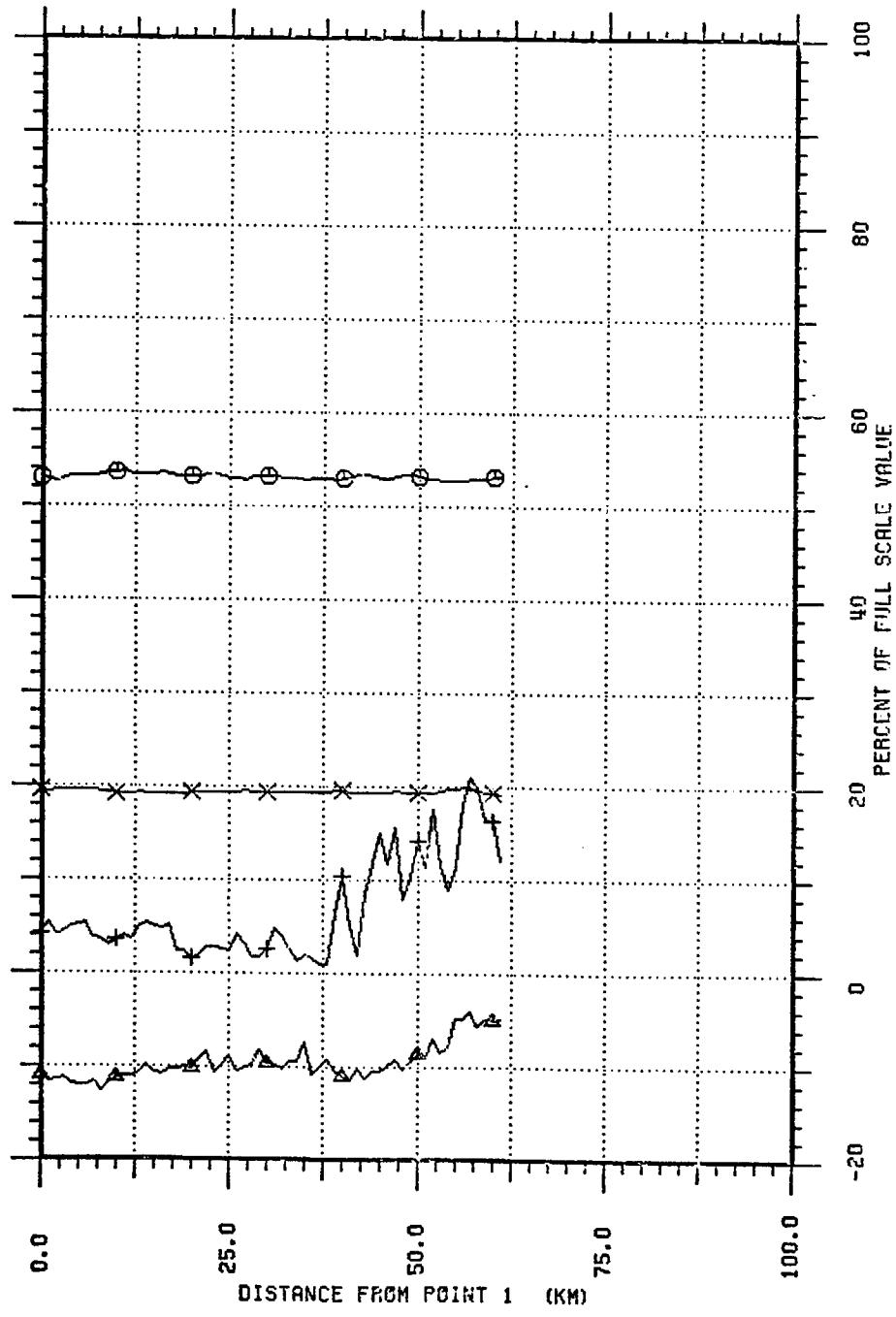


000925.1
02:36:53

SED TRANSPORT

TRAVERSE FROM POINT 1 TO POINT 2 (2134 M MSL)

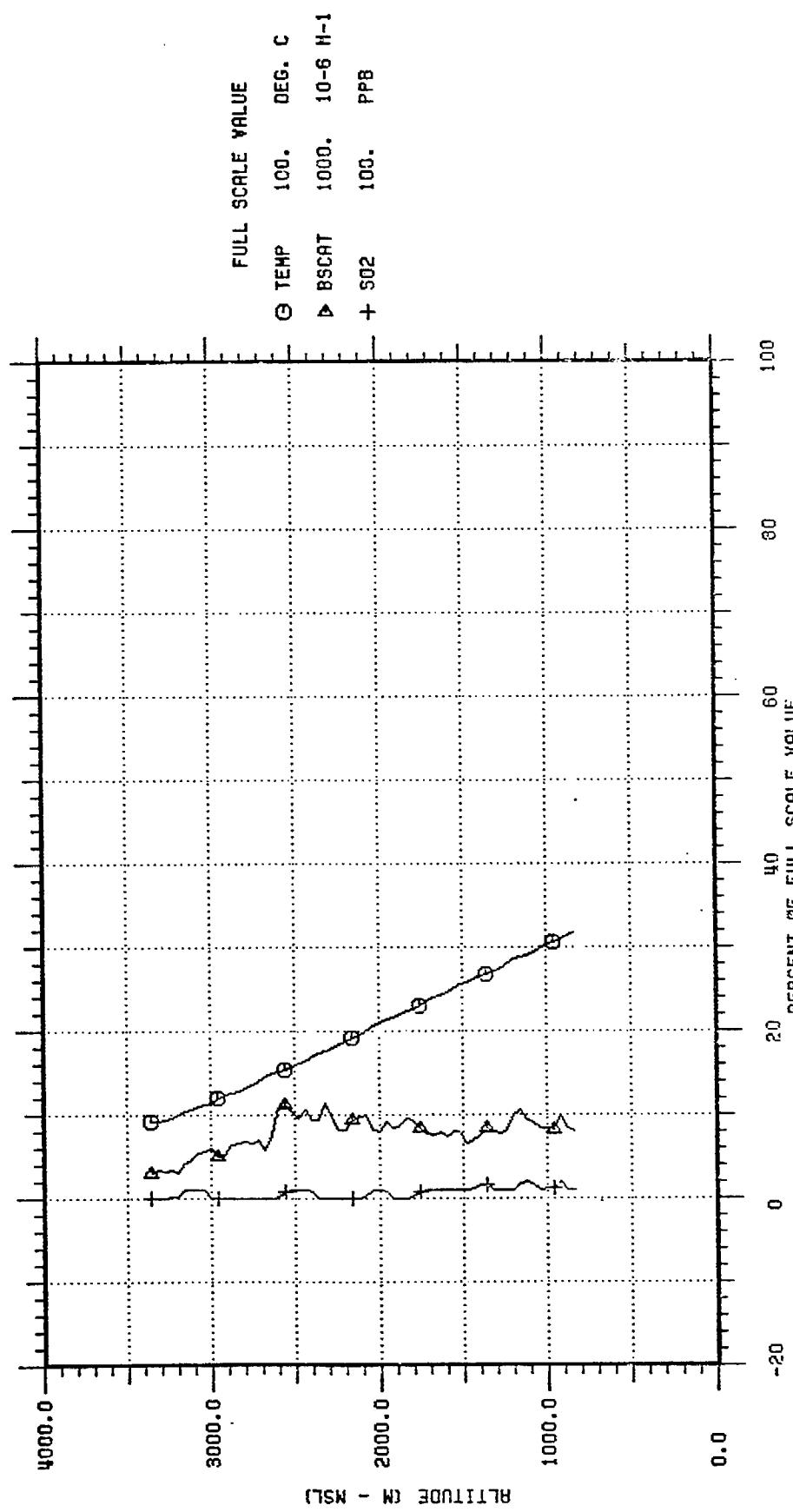
TAPE/PASS: 252/2 DATE: 7/14/81
TIME: 1553 TO 1612 (PDT)



600925.1
02:36:58

SED TRANSPORT
SPIRAL AT POINT 2

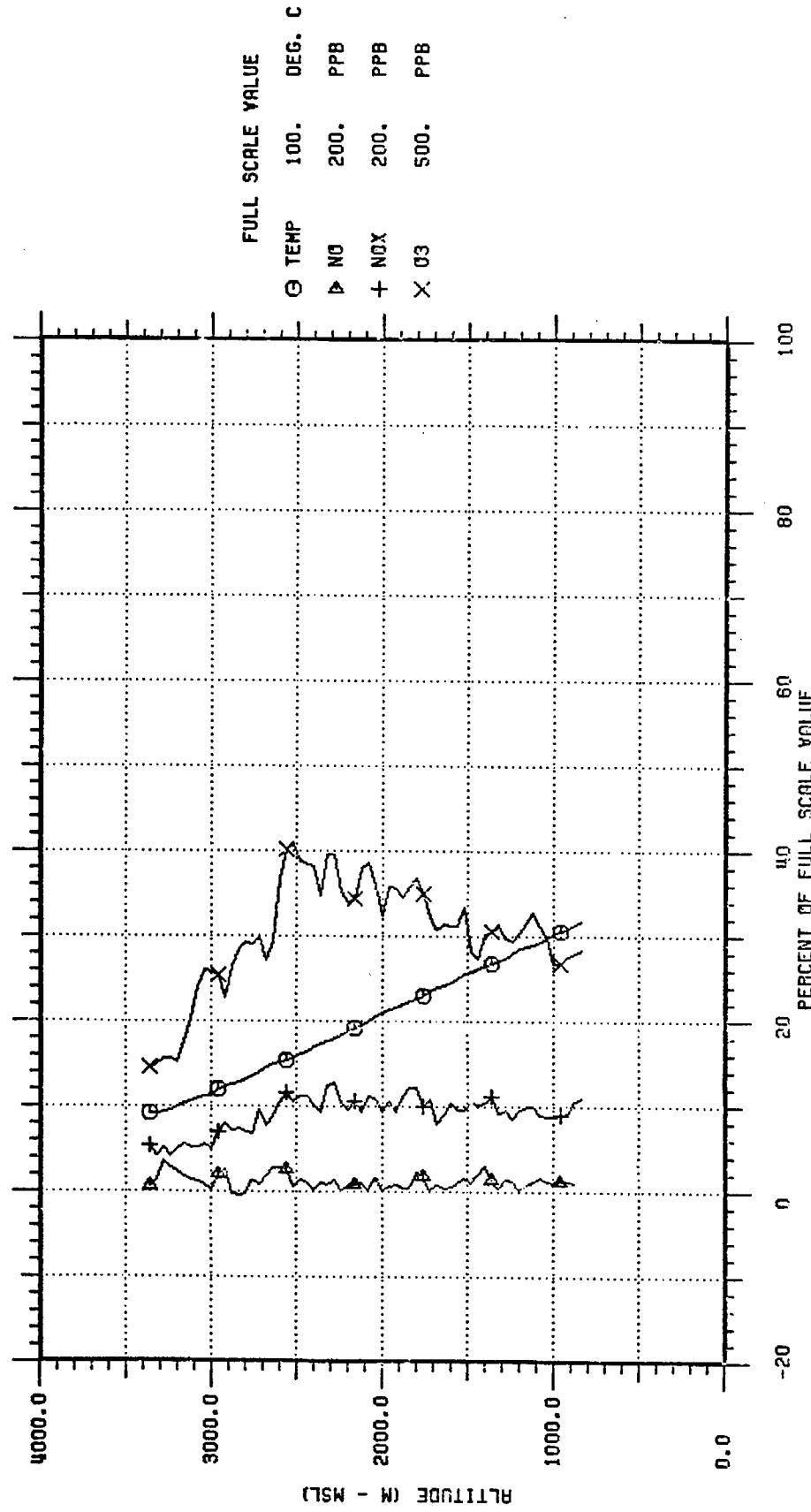
TAPE/PASS: 252/3 DATE: 7 /14/81
TIME: 1627 TO 1644 (PDT)



900025.1
03:12:08

SED TRANSPORT
SPIRAL AT POINT 2

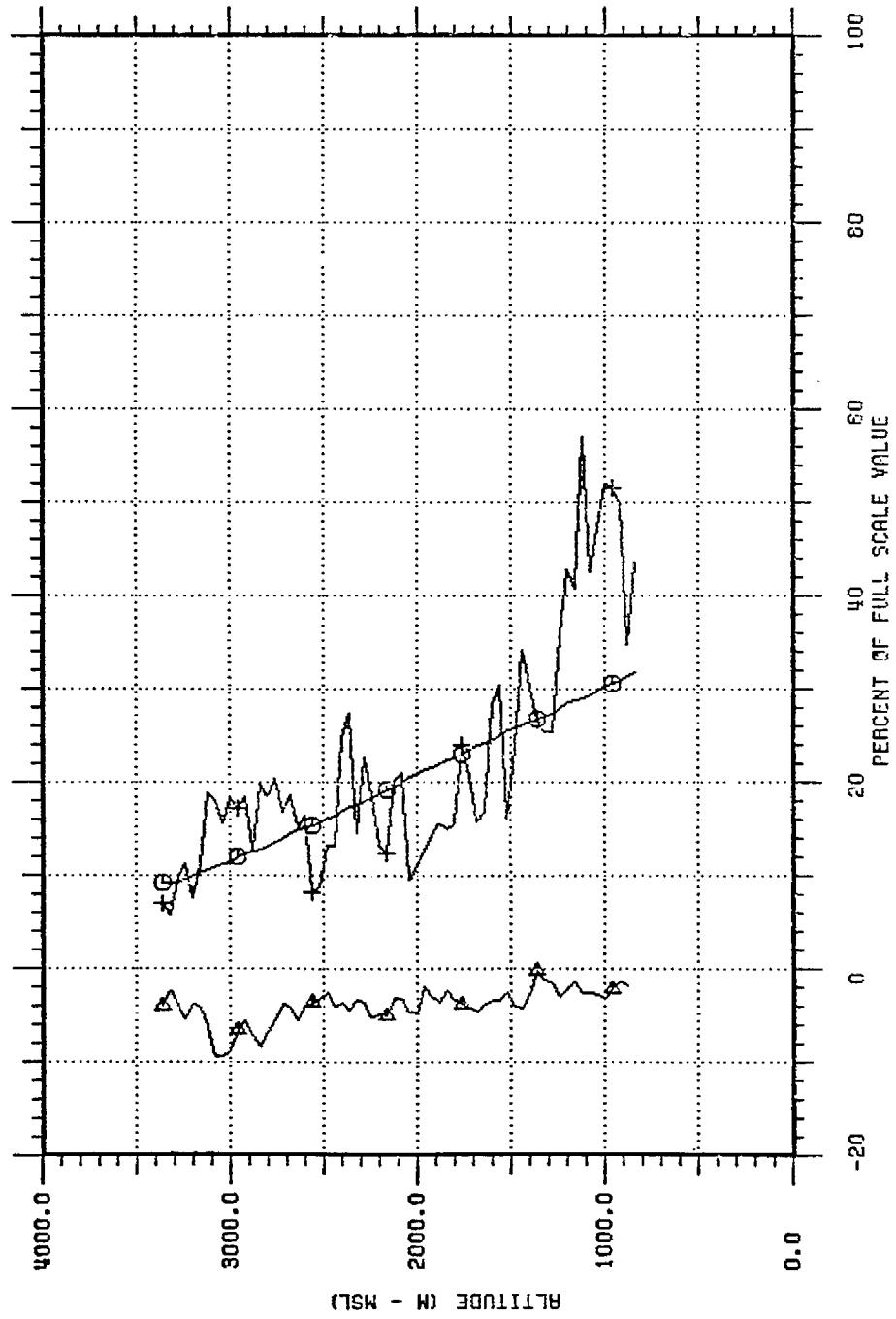
TRAIL/PASS: 252/3 DATE: 7 /14/81
TIME: 1627 TO 1644 (PDT)



800925.1
02:12:38

SED TRANSPORT
SPIRAL AT POINT 2

TAPE/PASS: 252/3 DATE: 7 /14/81
TIME: 1627 TO 1644 (PDT)

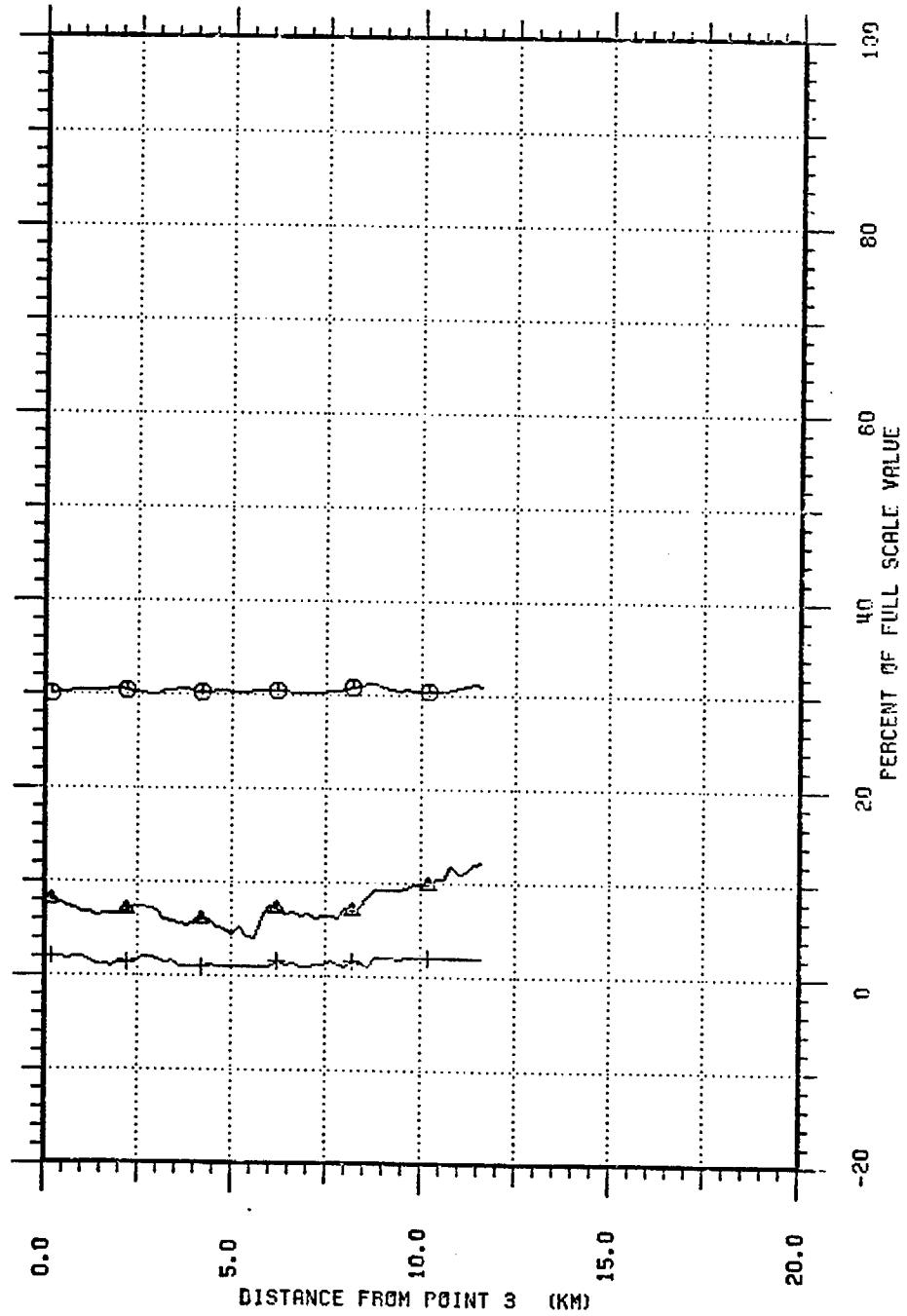


000925.1
02:12:03

SED TRANSPORT

TRaverse from POINT 3 TO POINT 4 (1219 M MSL)

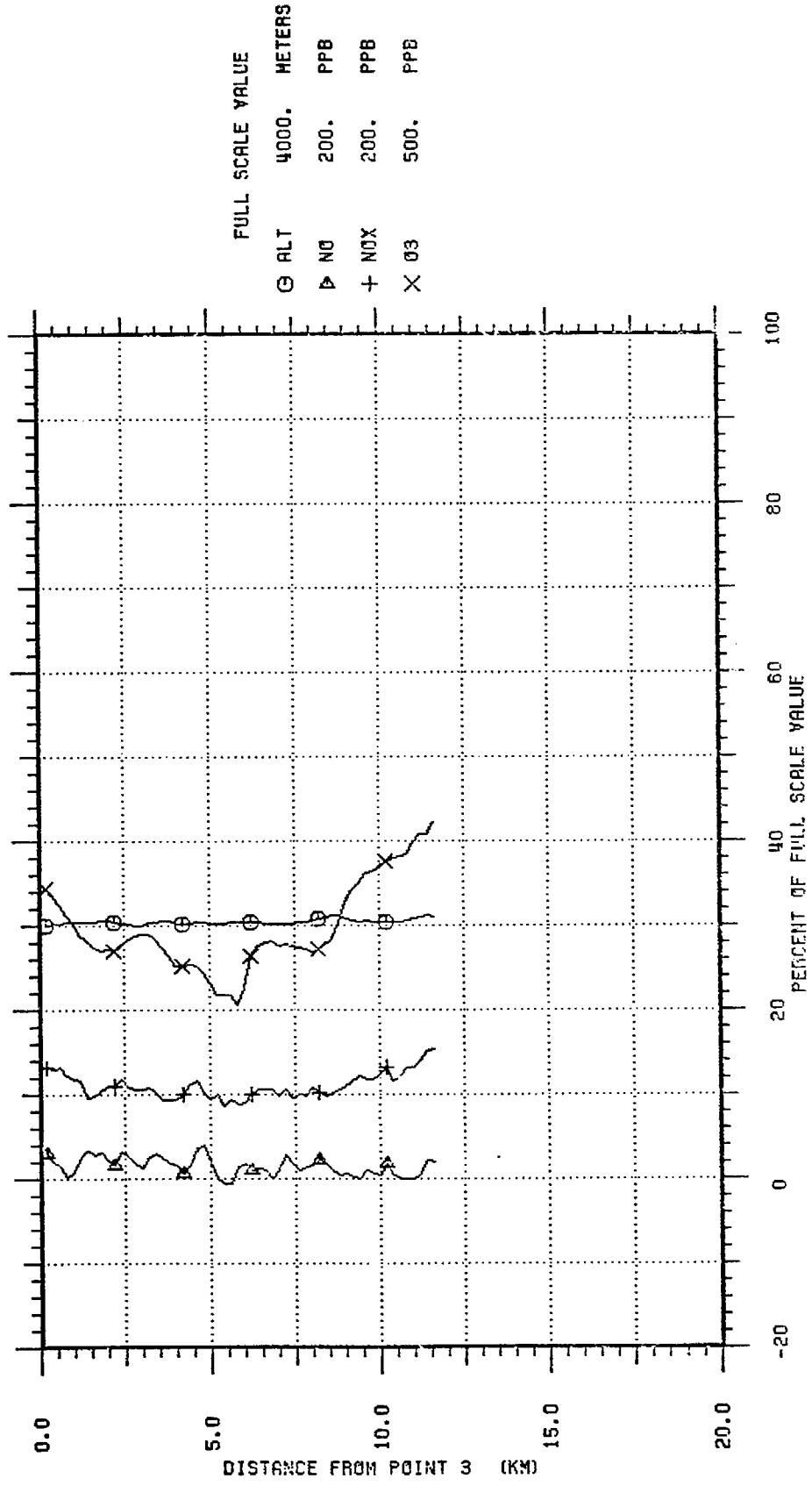
TAPE/PASS: 252/4 DATE: 7/14/81
TIME: 1647 TO 1651 (PDT)



200925.1
02:36:58

SED TRANSPORT
TRAVERSE FROM POINT 3 TO POINT 4 (11219 M MSL)

TAPE/PASS: 252/4 DATE: 7 /14/81
TIME: 1647 TO 1651 (PDT)

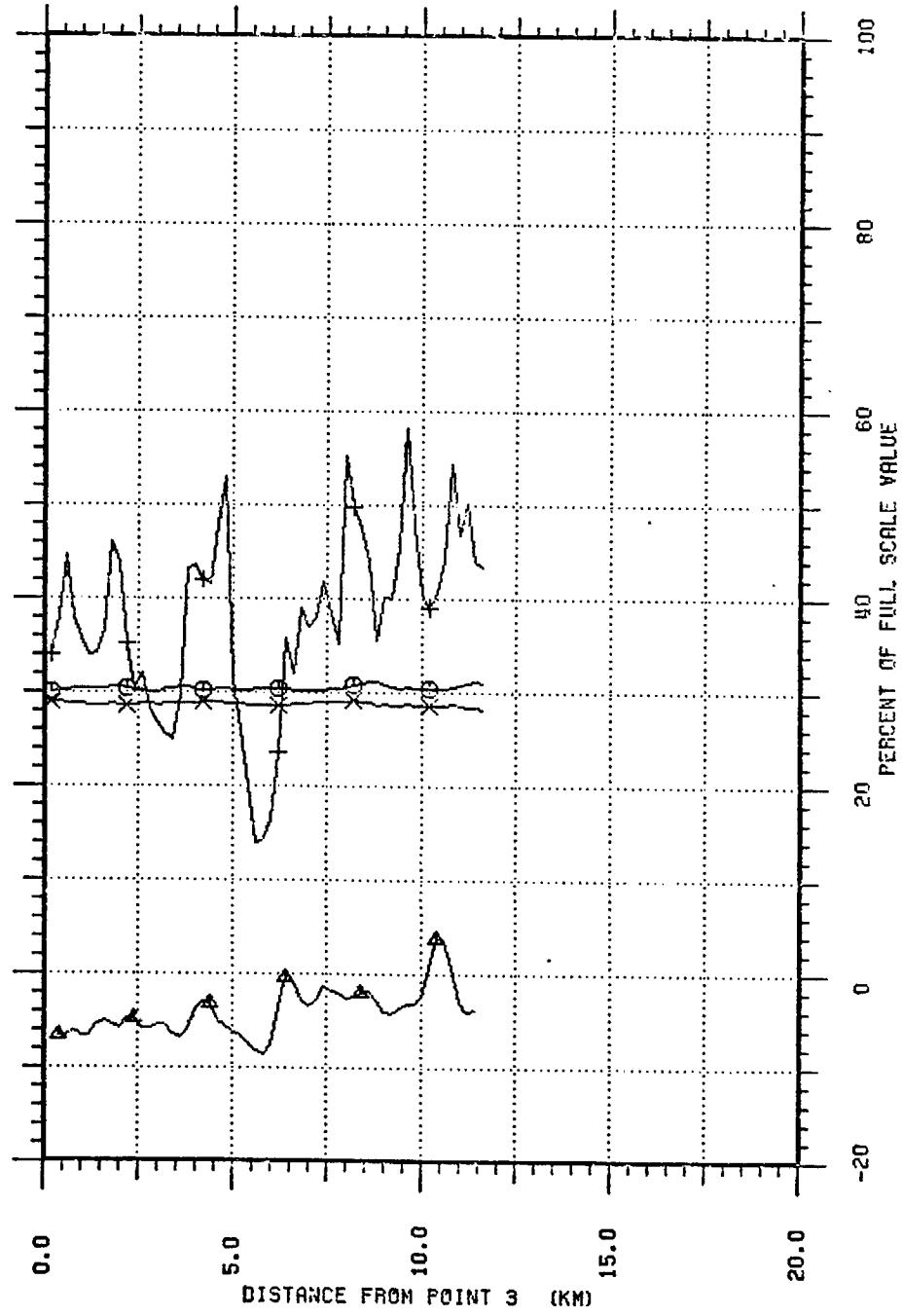


300925.1
02:36:58

SED TRANSPORT

TRaverse from Point 3 to Point 4 (1219 m MSL) TIME: 1647 TO 1651 (PDT)

TAPE/PASS: 252/4 DATE: 7/14/81

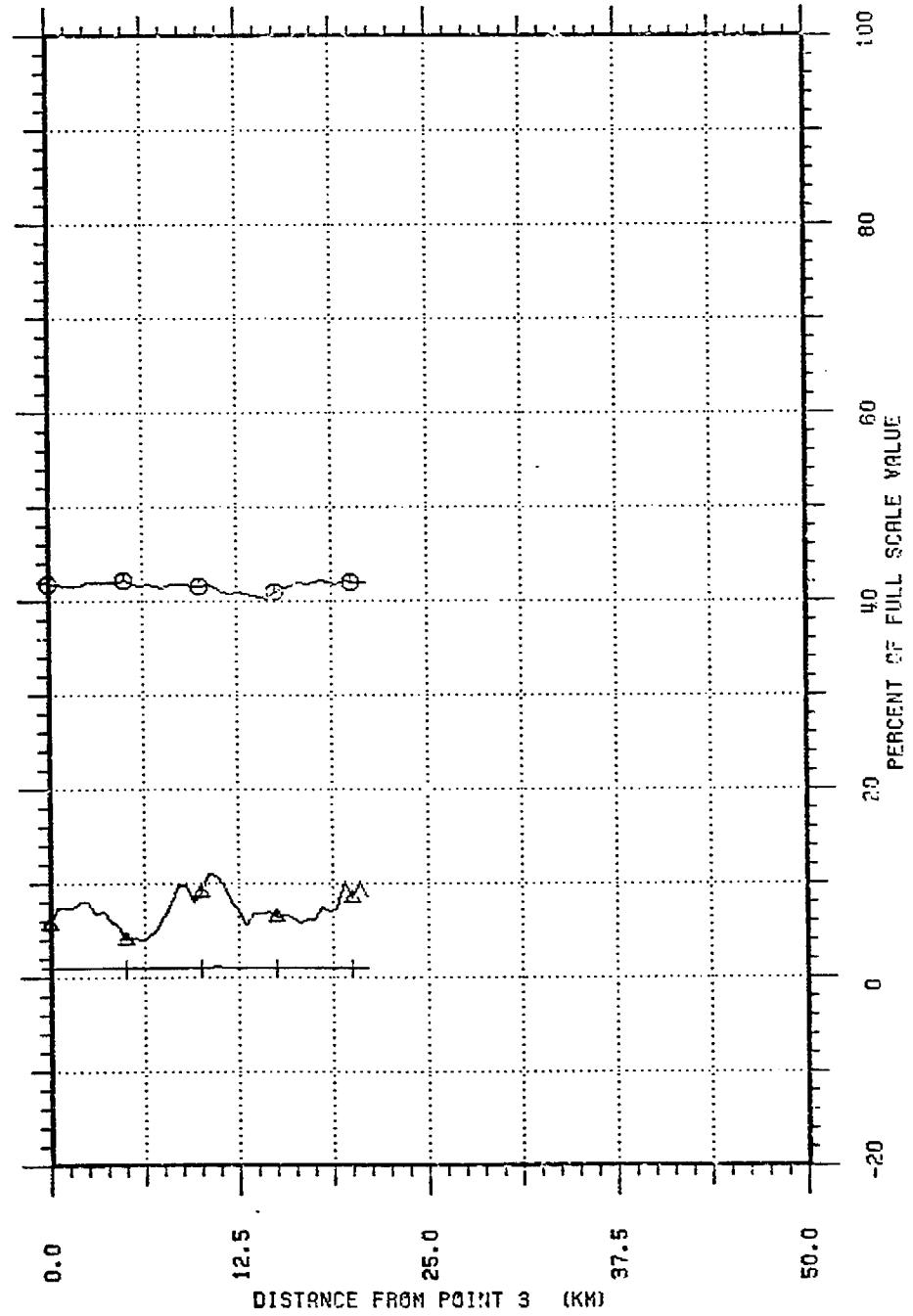


800925.1
02:36:56

SED TRANSPORT

TRAVERSE FROM POINT 3 TO POINT 5 (1676 M MSL)

TAPE/PASS: 252/5 DATE: 7/14/81
TIME: 1659 TO 1706 (PDT)

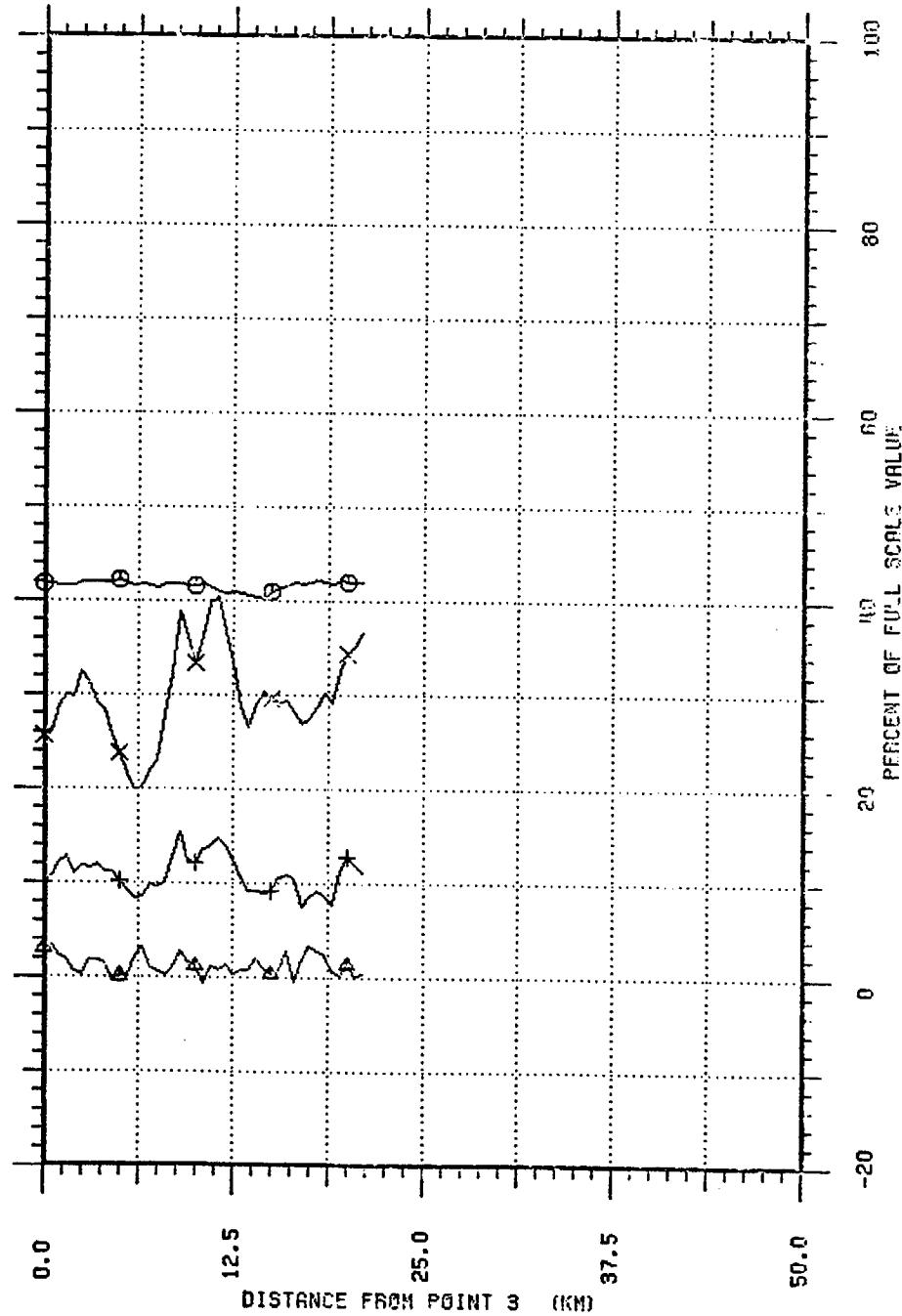


000925.1
(12:26:53)

SED TRANSPORT

TRAVESE FROM POINT 3 TO POINT 5 (1659 M MSL)

TAPE/PASS: 252/5 DATE: 7/14/81
TIME: 1659 TO 1706 (PDT)

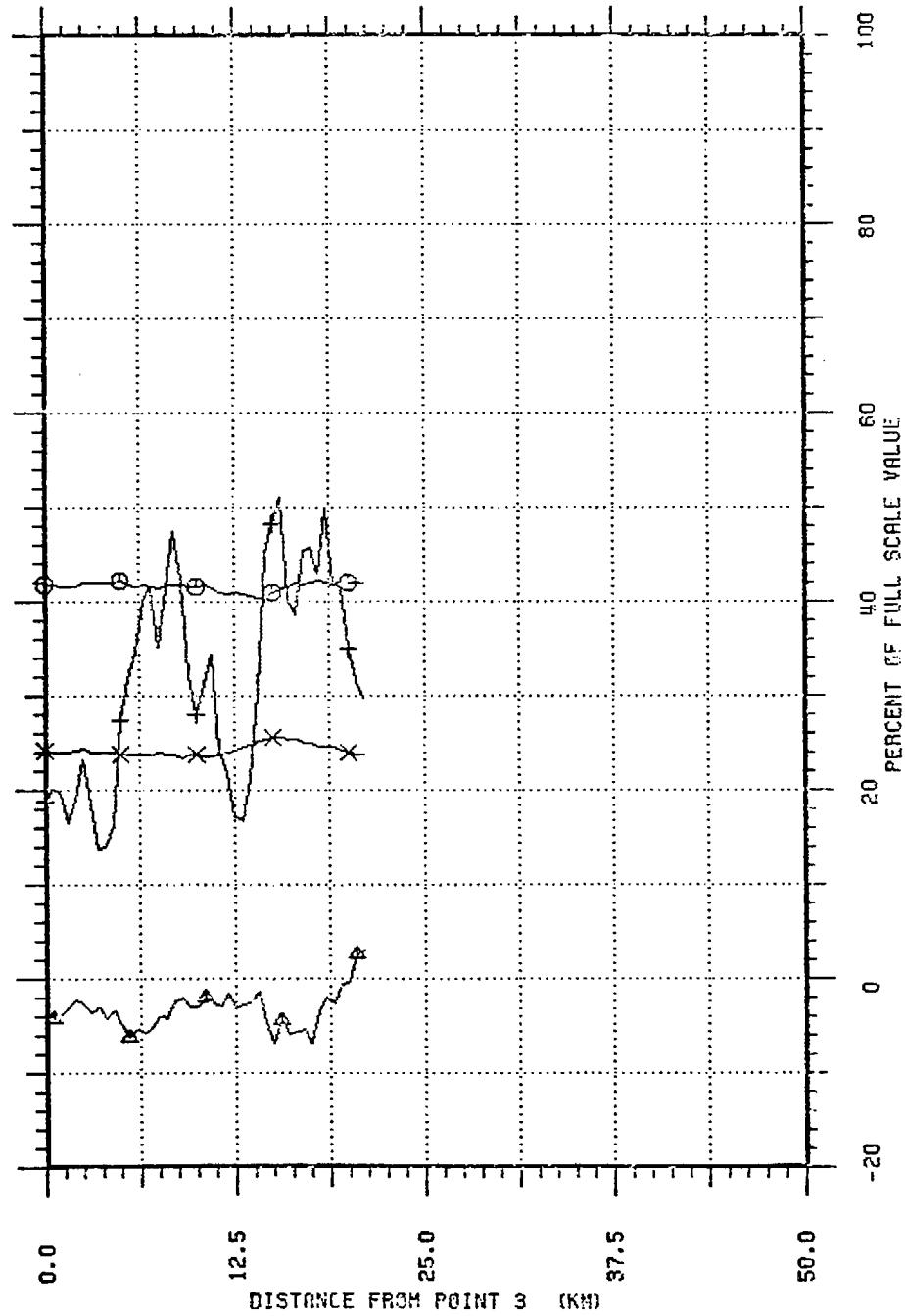


890925:1
02:36:39

SED TRANSPORT

TRAVERSE FROM POINT 3 TO POINT 5 (1676 M MSL)

TAPE/PASS: 252/5 DATE: 7/14/81
TIME: 1659 TG 1706 (PDT)

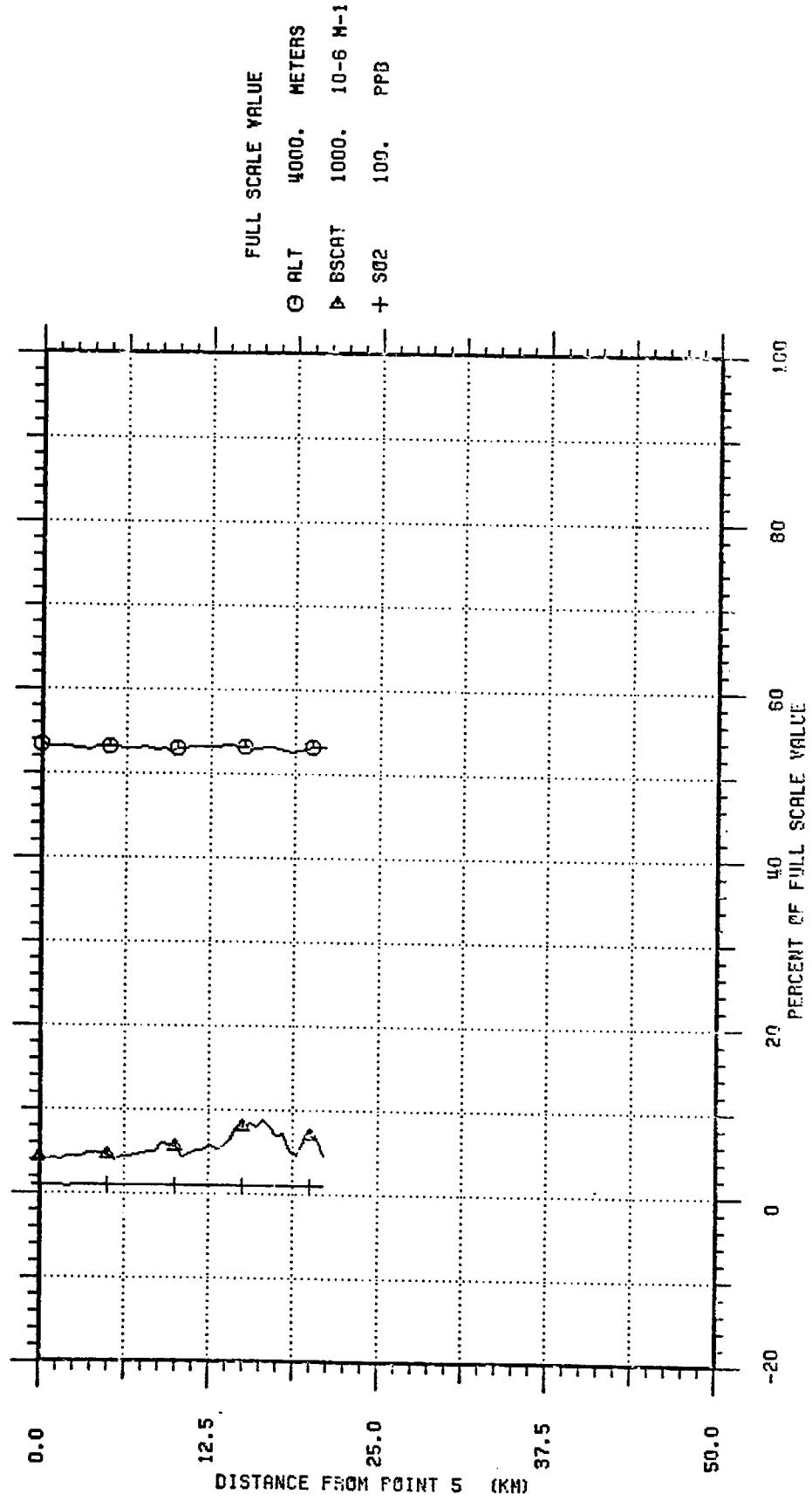


8000925.1
02:36:53

SED TRANSPORT

TRaverse FROM POINT 5 TO POINT 3 (2134 M MSL) TIME: 1713 TO 1720 (PDT)

TRAP/PRSS: 252/6 DATE: 7/14/81

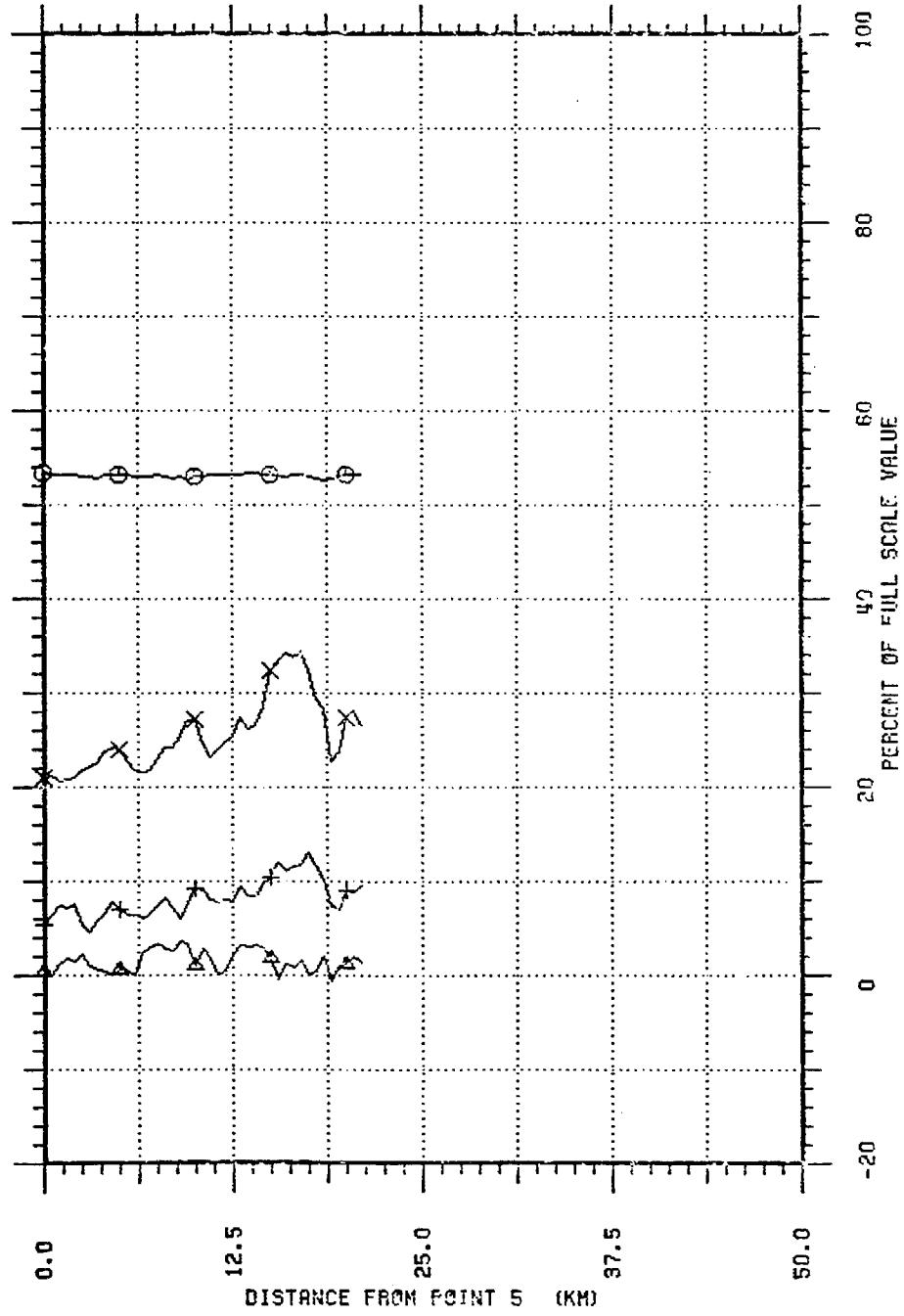


200925.1
02:36:53

SED TRANSPORT

TRAVESE FROM POINT 5 TO POINT 3 (2134 M MSL)

TAPE/PASS: 252/6 DATE: 7/14/81
TIME: 1713 TO 1720 (PDT)

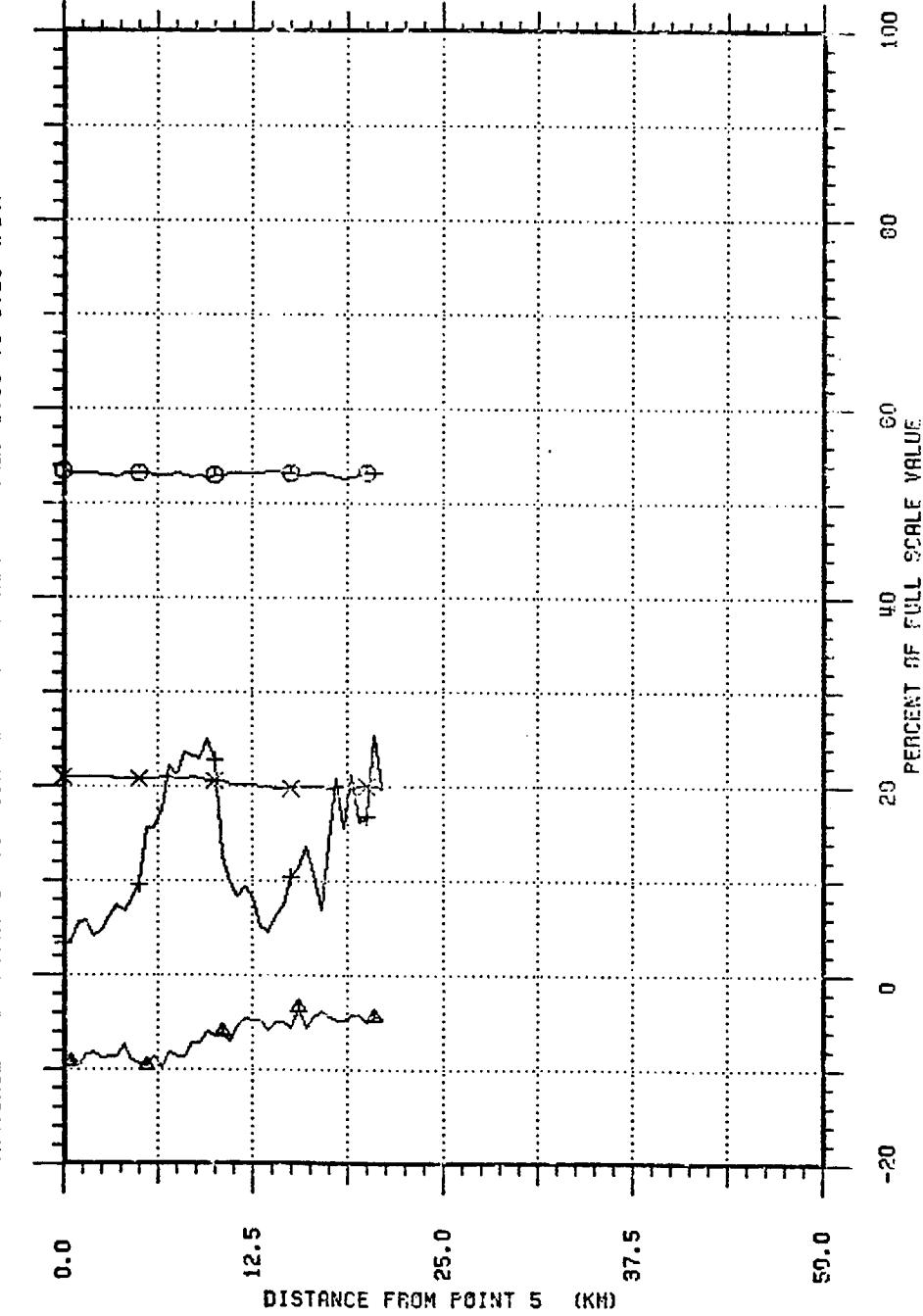


800925.1
02:36.53

SED TRANSPORT

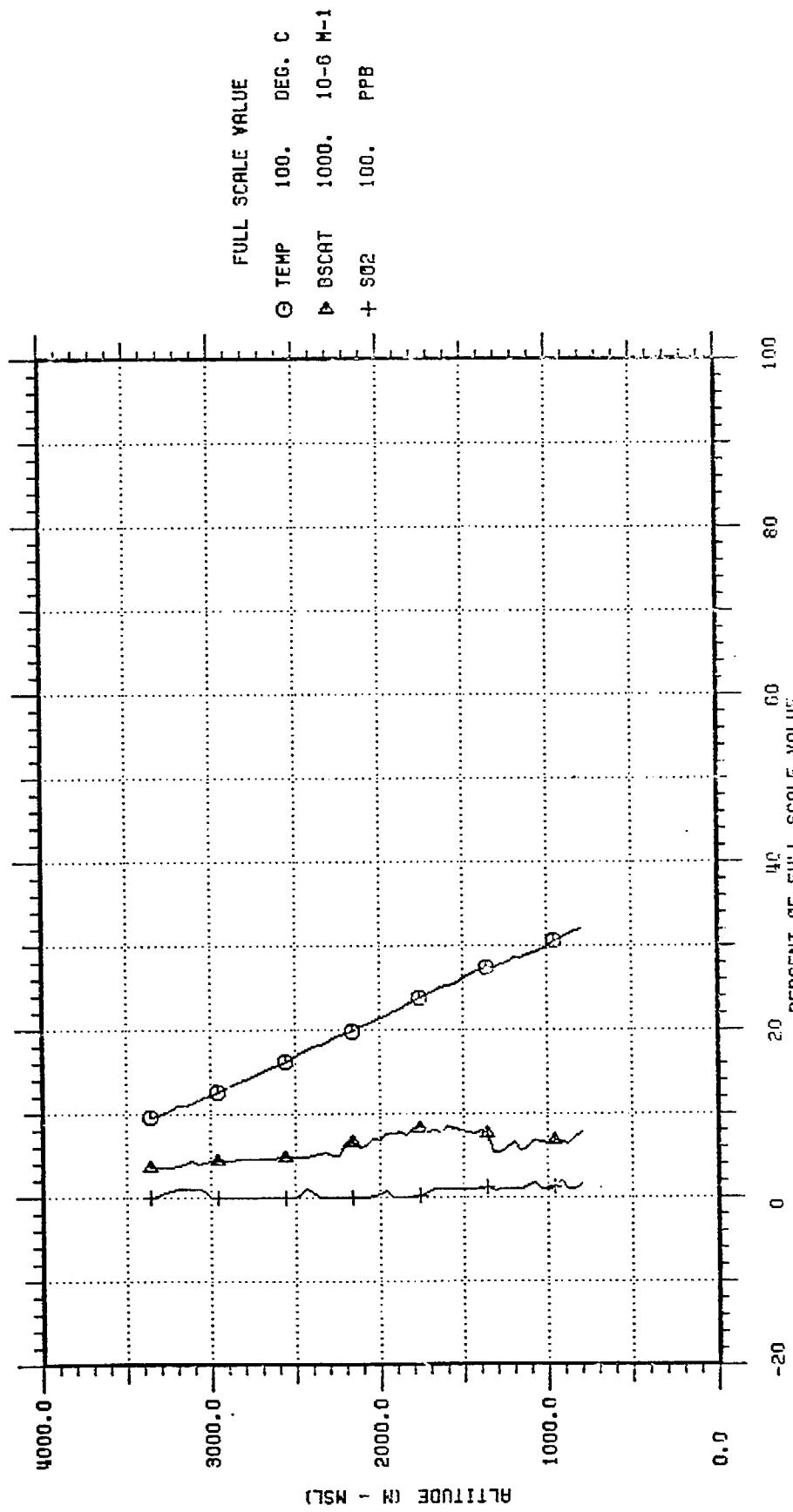
TRAVERSE FROM POINT 5 TO POINT 3 (2194 M MSL)

TAPE/PASS: 252/6 DATE: 7/14/81



SED TRANSPORT
SATELLITE AT POINT 6

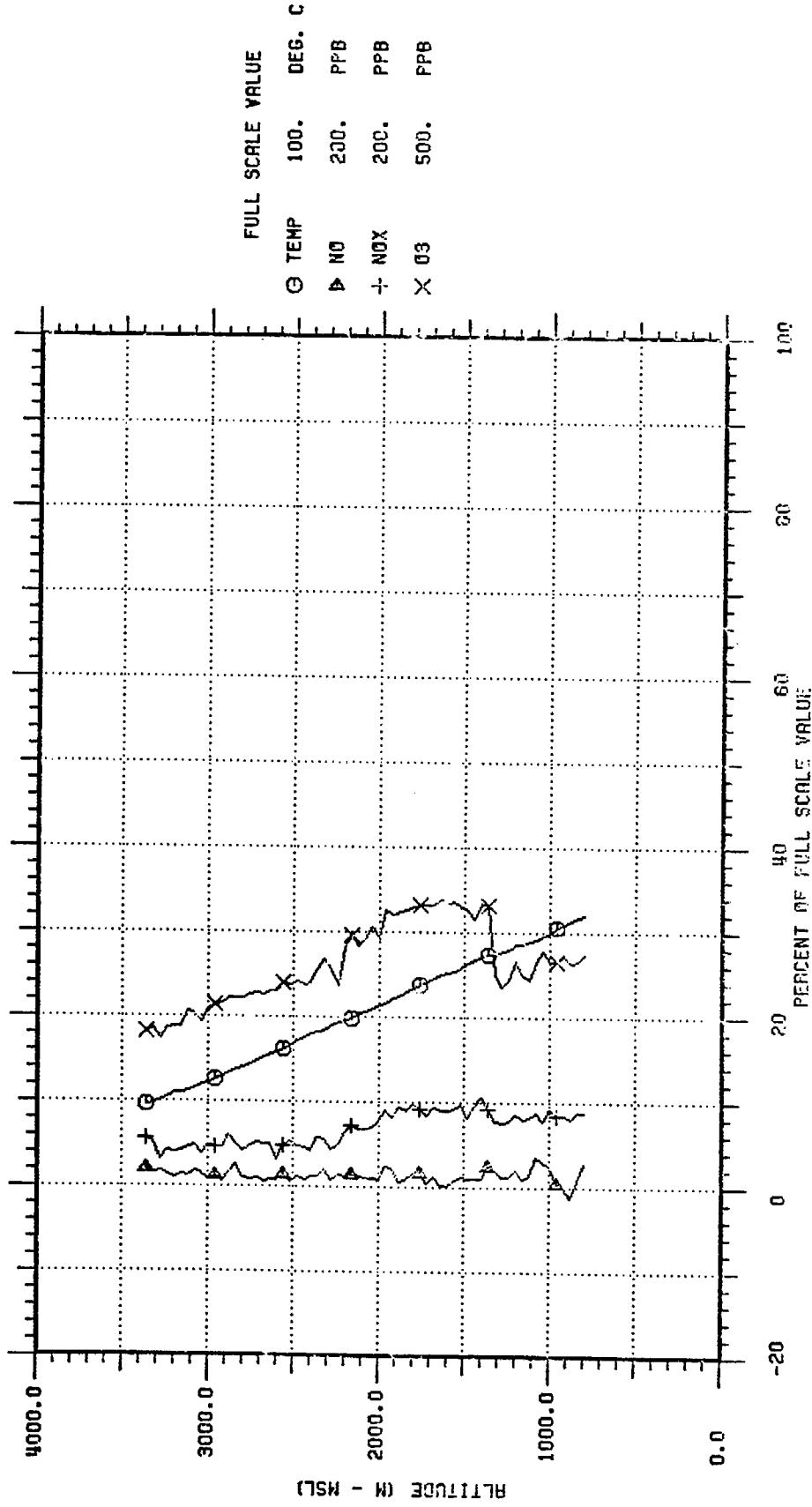
TOPE/PASS: 252/7 DATE: 7 /14/81
TIME: 1740 TO 1802 (PDT)



200925.1
02:12:09

SED TRANSPORT
SPIRAL AT POINT 6

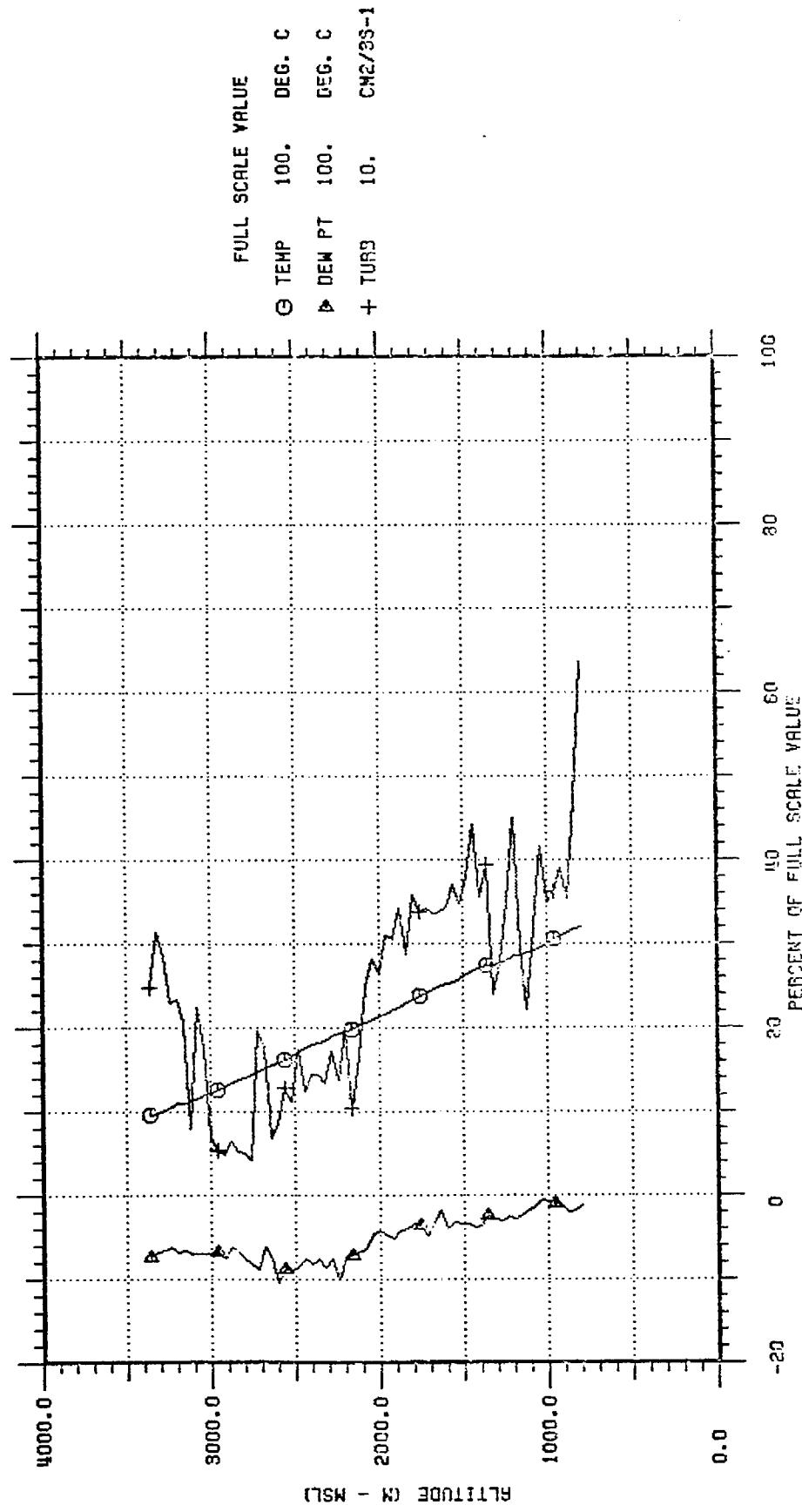
TAPE/PASS: 252/7 DATE: 7 /10/81
TIME: 1740 TO 1802 (PDT)



E00925.1
03:12:09

SED TRANSPORT
SPIRAL AT POINT 6

TAPE/PASS: 252/7 DATE: 7/14/81
TIME: 1740 TO 1802 (PDT)

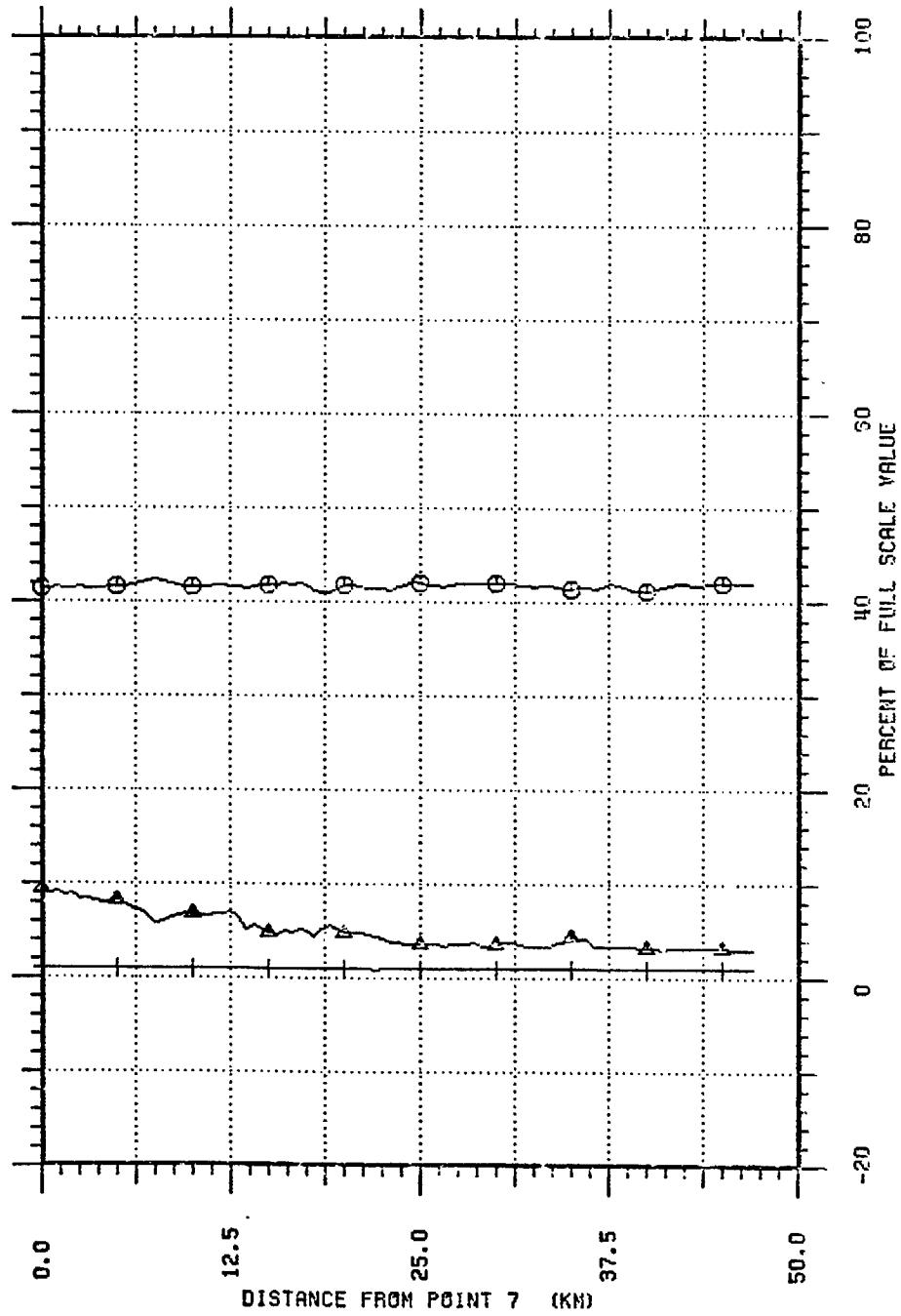


800925.1
0312:03

SED TRANSPORT

TRaverse from Point 7 to Point 8 (11676 m MSL)

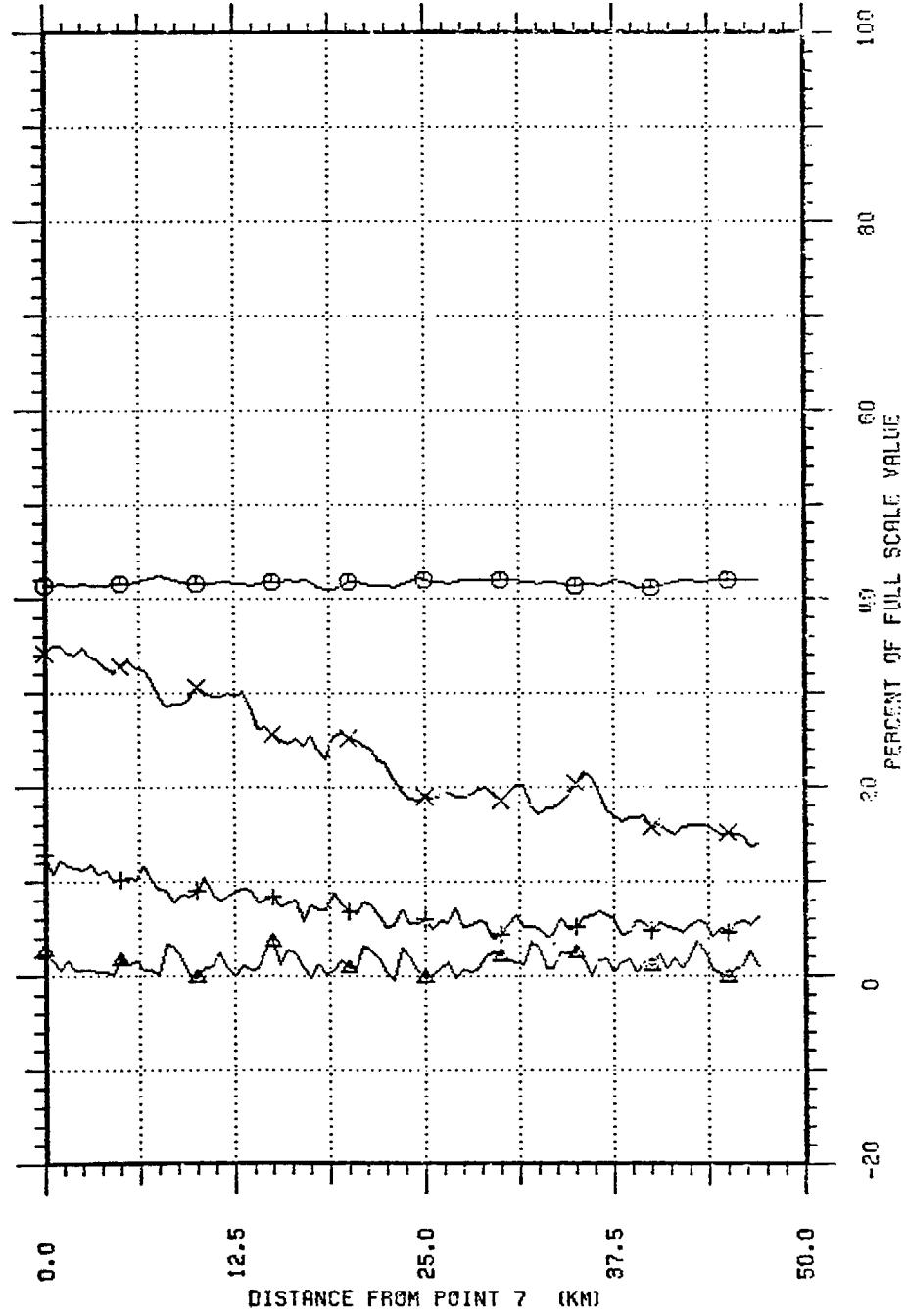
TAPE/PASS: 252/8 DATE: 7/14/81
TIME: 1811 TO 1825 (PDT)



SED TRANSPORT

TRAVESE FROM POINT 7 TO POINT 8 (1676 M MSL)

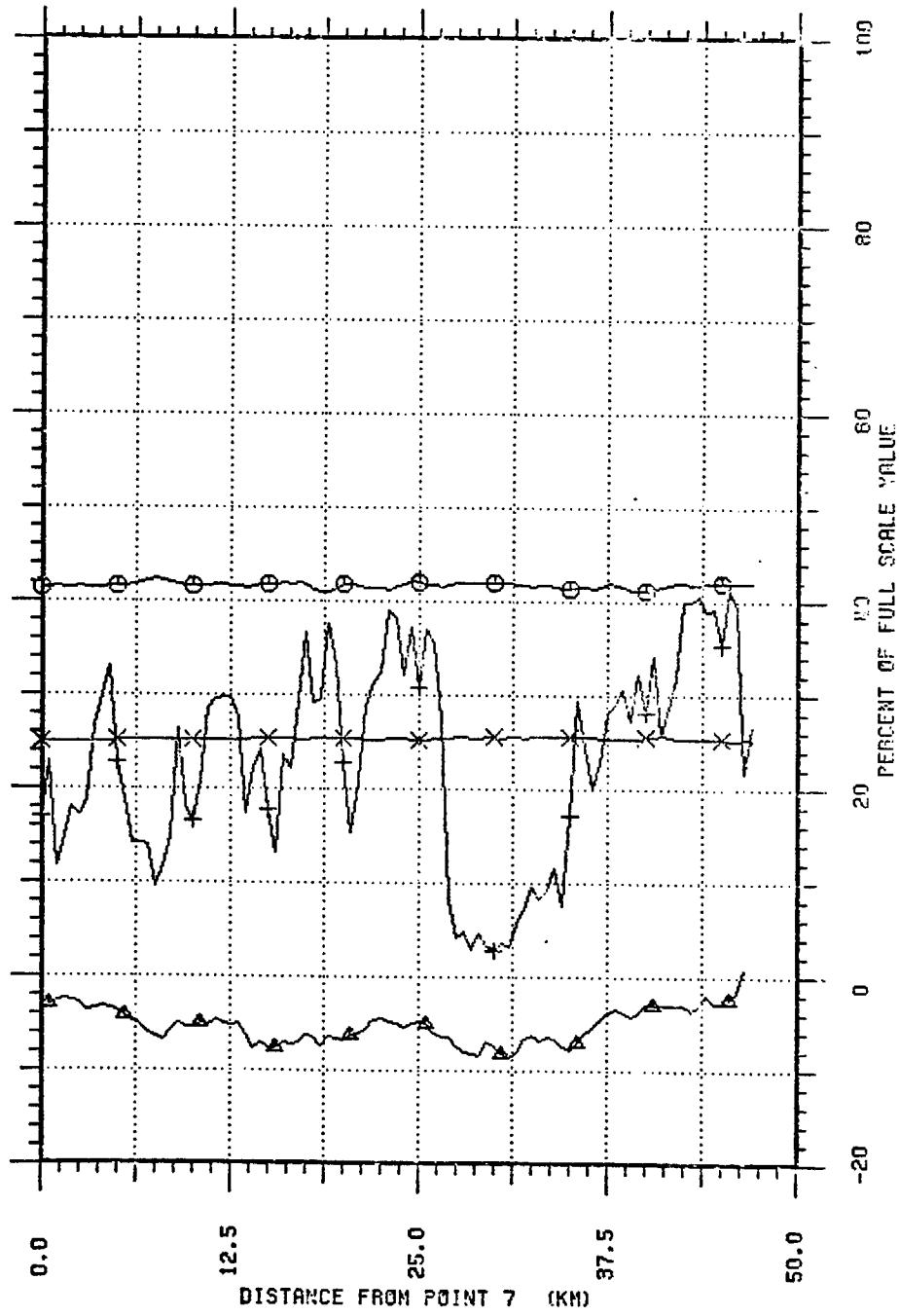
TAPE/PASS: 252/8 DATE: 7 /14/81
TIME: 1811 TO 1825 (PDT)



800925.1
02:36:53

SED TRANSPORT

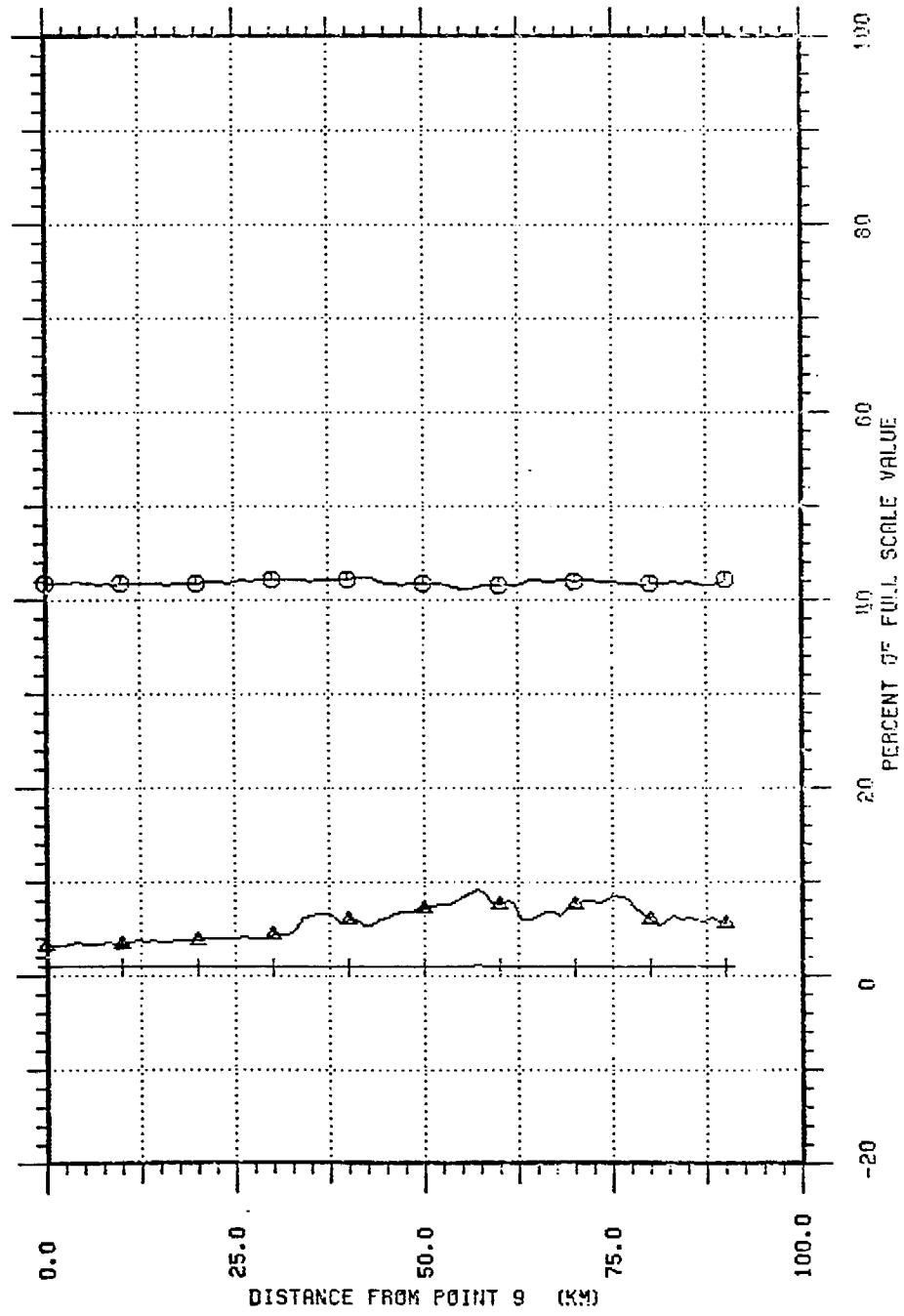
TAPE/PASS: 252/8 DATE: 7/14/81
TRAVESE FROM POINT 7 TO POINT 8 (1676 M MSL) TIME: 1811 TO 1825 (PDT)



607925-1
CH2/35-1

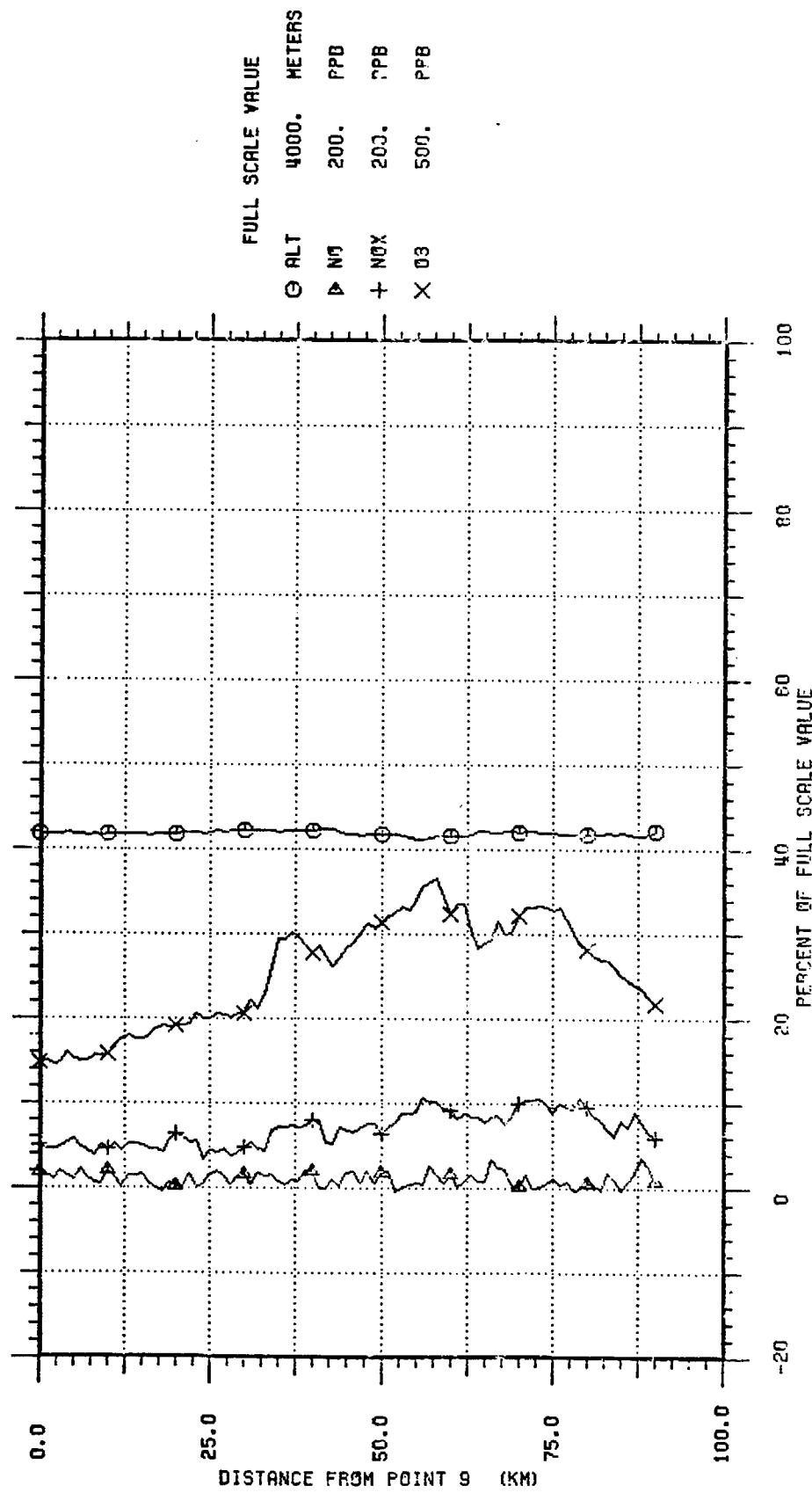
SED TRANSPORT
TRAVERSE FROM POINT 9 TO POINT 10 (1676 M MSL)

TAPE/PASS: 252/9 DATE: 7 /14/81
TIME: 1032 TO 1056 (PDT)



200325.1
02:36:38

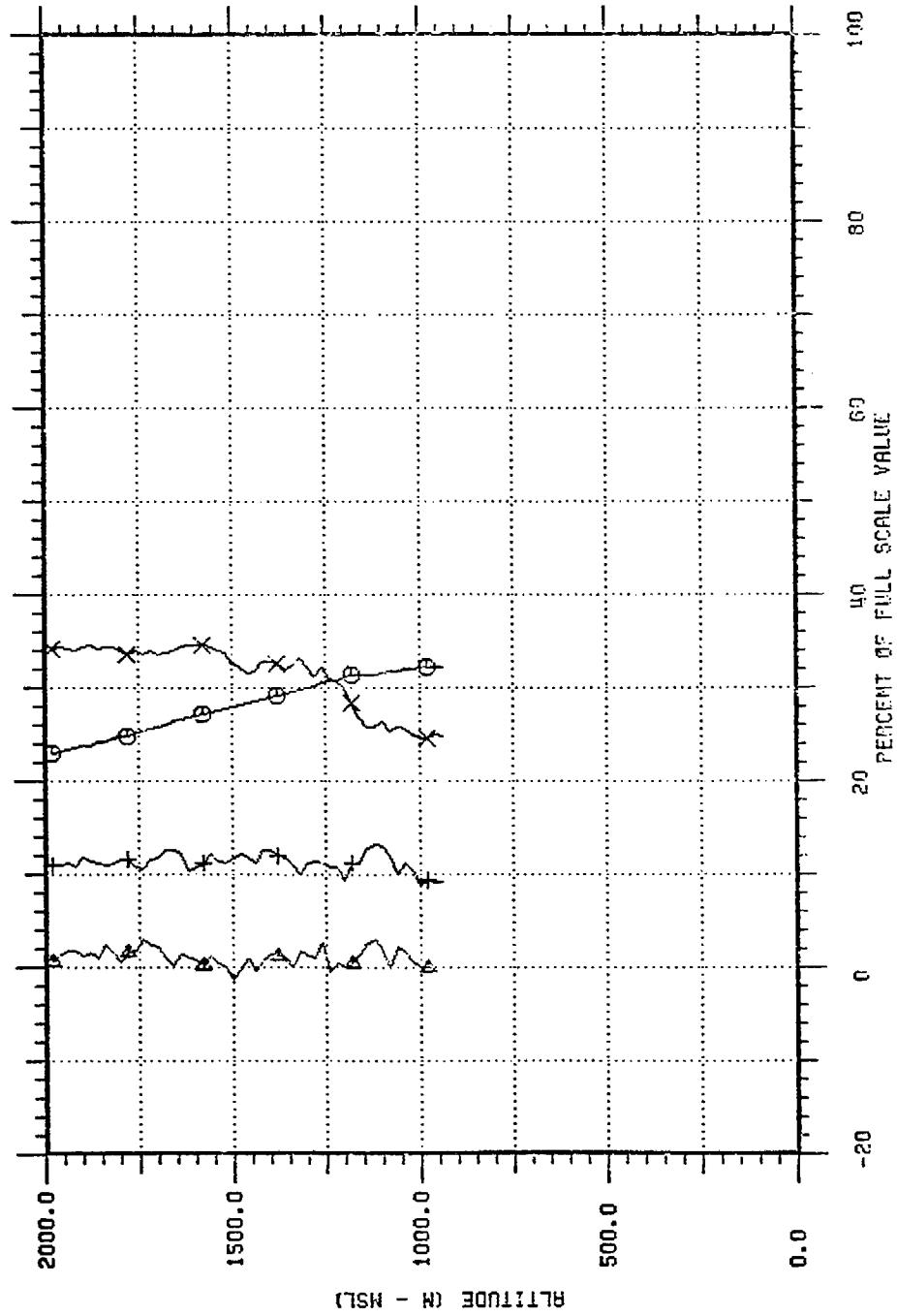
SED TRANSPORT
TRAVESE FROM POINT 9 TO POINT 10 (11676 M MSL) TIME: 1832 TO 1856 (PDT)



PC00925.1
D: 26.5A

SED TRANSPORT
SIGNAL AT POINT 11

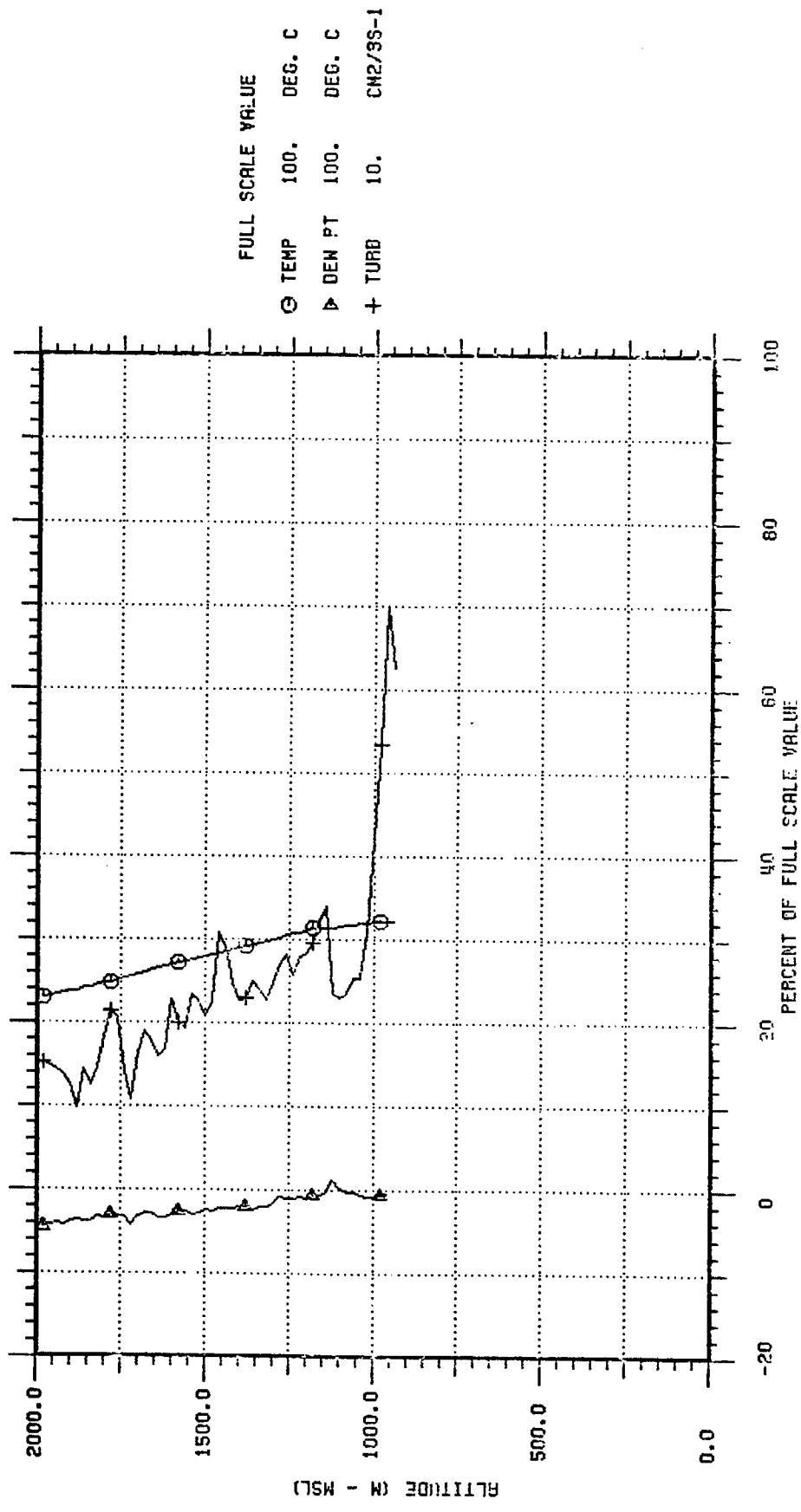
DATE/PASS: 252/10 DATE: 7 /14/81
TIME: 1903 TO 1911 (PDT)



300925.1
03:13:08

SED TRANSPORT
SPIRAL AT POINT 11

TAPE/PRESS: 252/10 DATE: 7/14/81
TIME: 1903 TO 1911 (PDT)



800925.1
02:12:03

MRI FLIGHT SUMMARY

Date: July 15, 1981

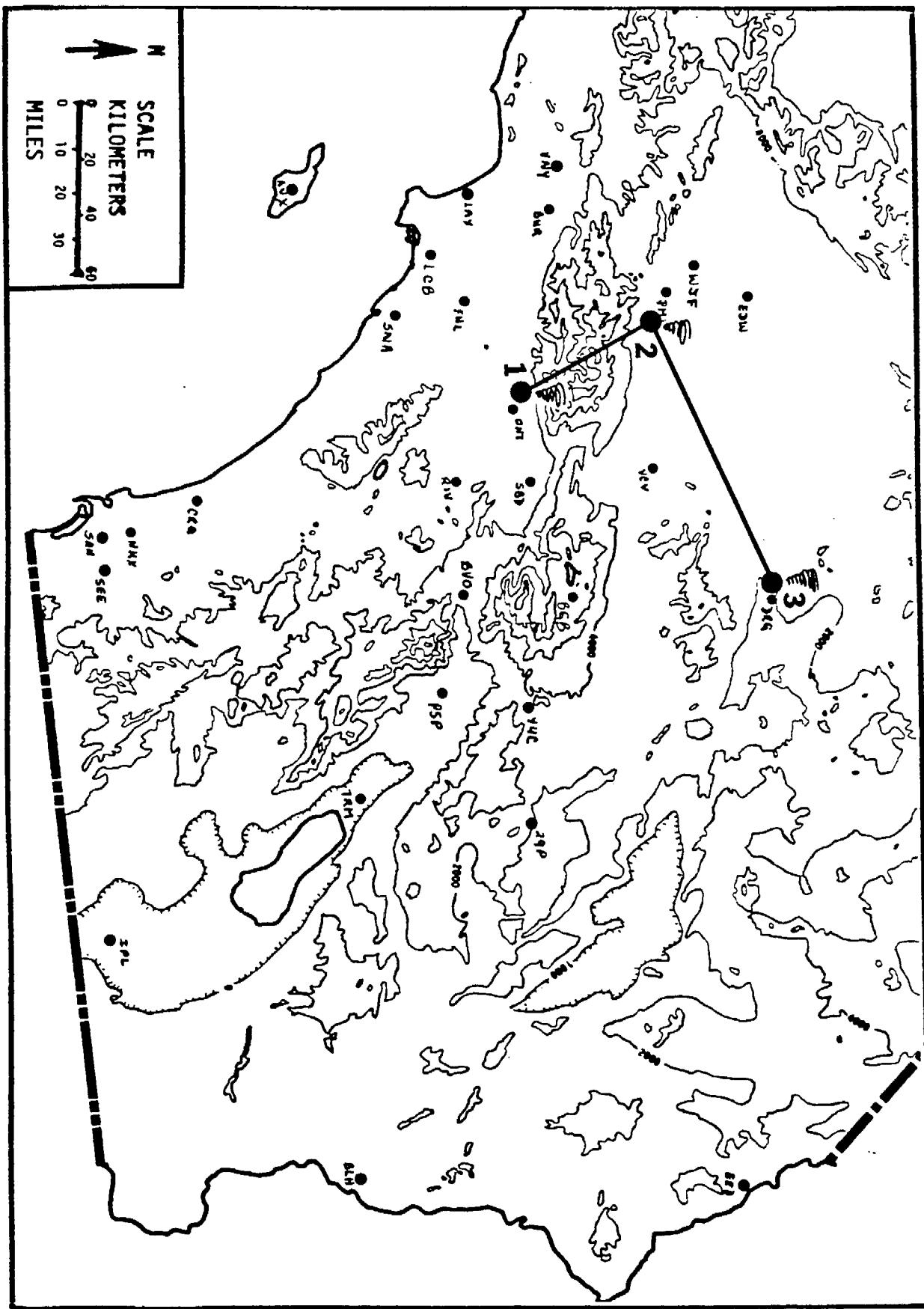
SOUTHEAST DESERT OZONE TRANSPORT STUDY

Tape #: 253

Pass No.	Sampling Times (PDT) Start	Flight Type	End Points	Sampling Altitude m MSL Start End	Traverse Length or Orbit Time	Tracer Samples	Comments
1	834	847 Spiral	1	442-1829	N.A.	C1-10	Sfc Elev = 442 m
2	847	906 Traverse	1 - 2	1829-3048	61.2 Km.	C11-20	
3	906	921 Spiral	2	3048-792	N.A.	C21-38	Sfc Elev = 777 m
4	928	956 Traverse	2 - 3	1219	97.4 Km.	C39-54	
5	959	1015 Spiral	3	640-2591	N.A.	C55-68	Sfc Elev = 634 m
6	1043	1056 Zero Spiral		2591-442	N.A.	0	Instrument calibration

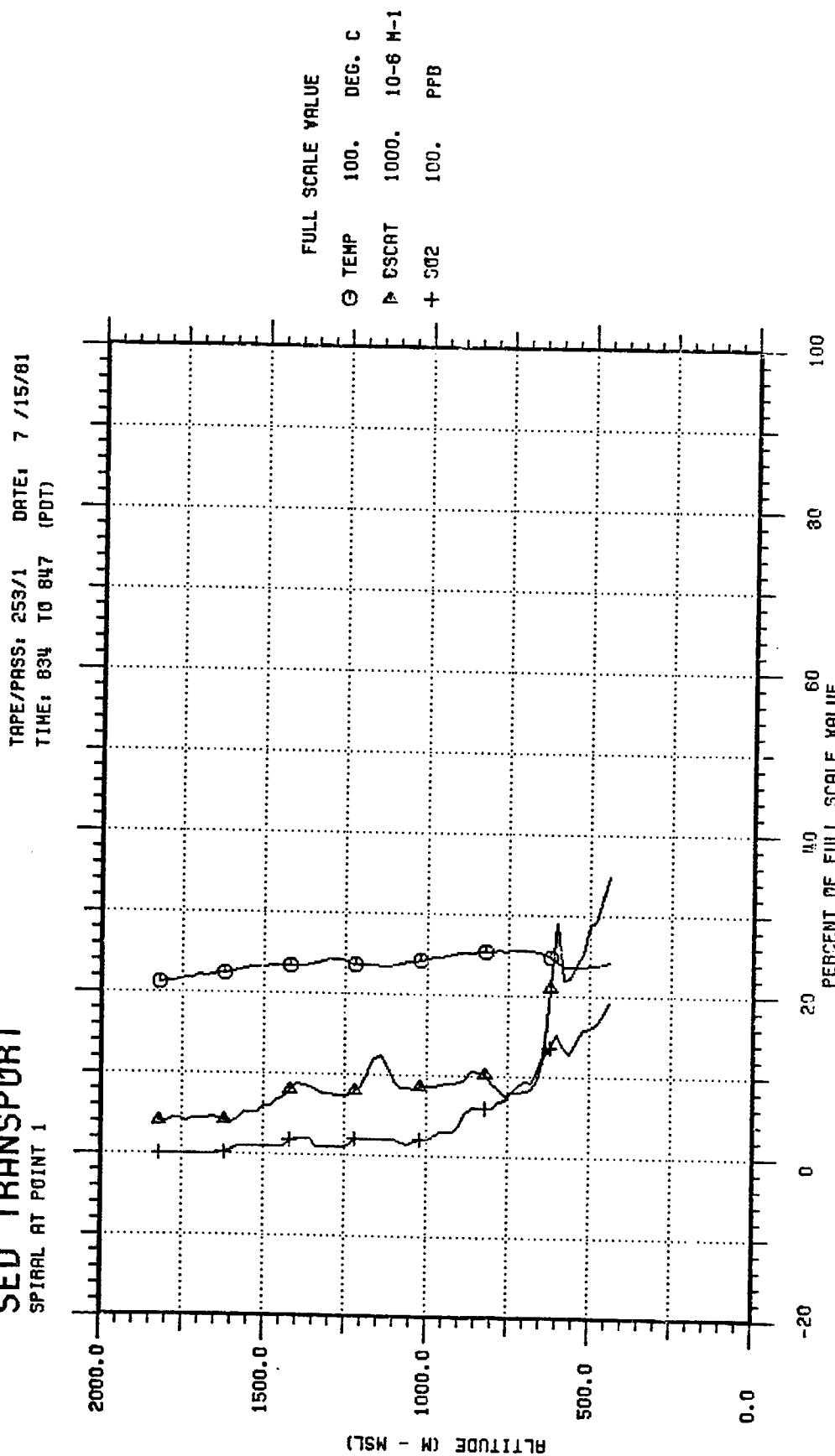
15 July 1981 Tape #253
TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°06.0'	117°037.3'	Cable Airport
2	34°34.6'	118°002.8'	5 miles west of Palmdale
3	34°54.3'	117°003.0'	Barstow



SED TRANSPORT
SPIRAL AT POINT 1

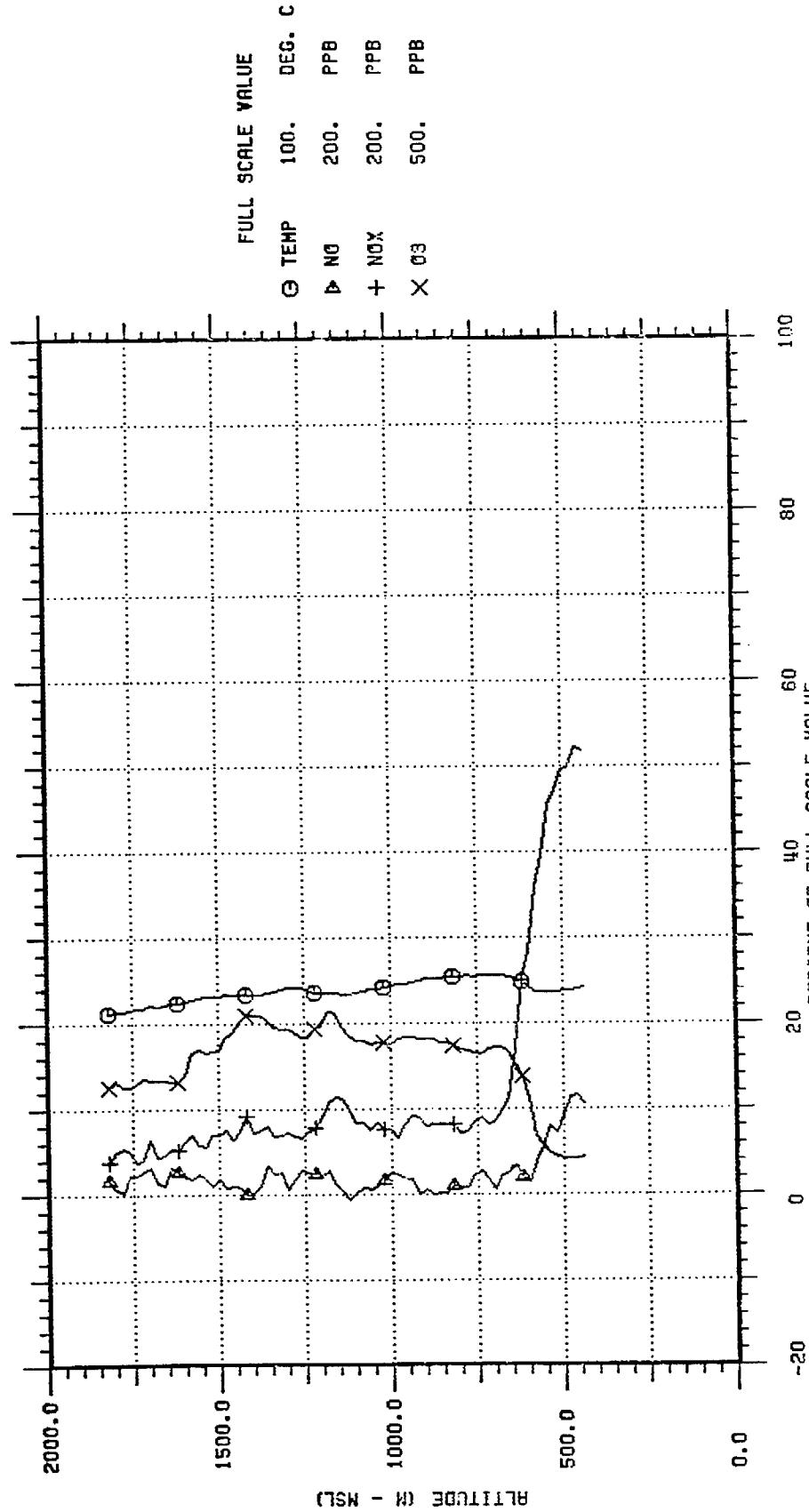
TAPE/PASS: 253/1
TIME: 034 TO 847 (PDT)



800925.1
03:05:41

SED TRANSPORT
SPIRAL AT POINT 1

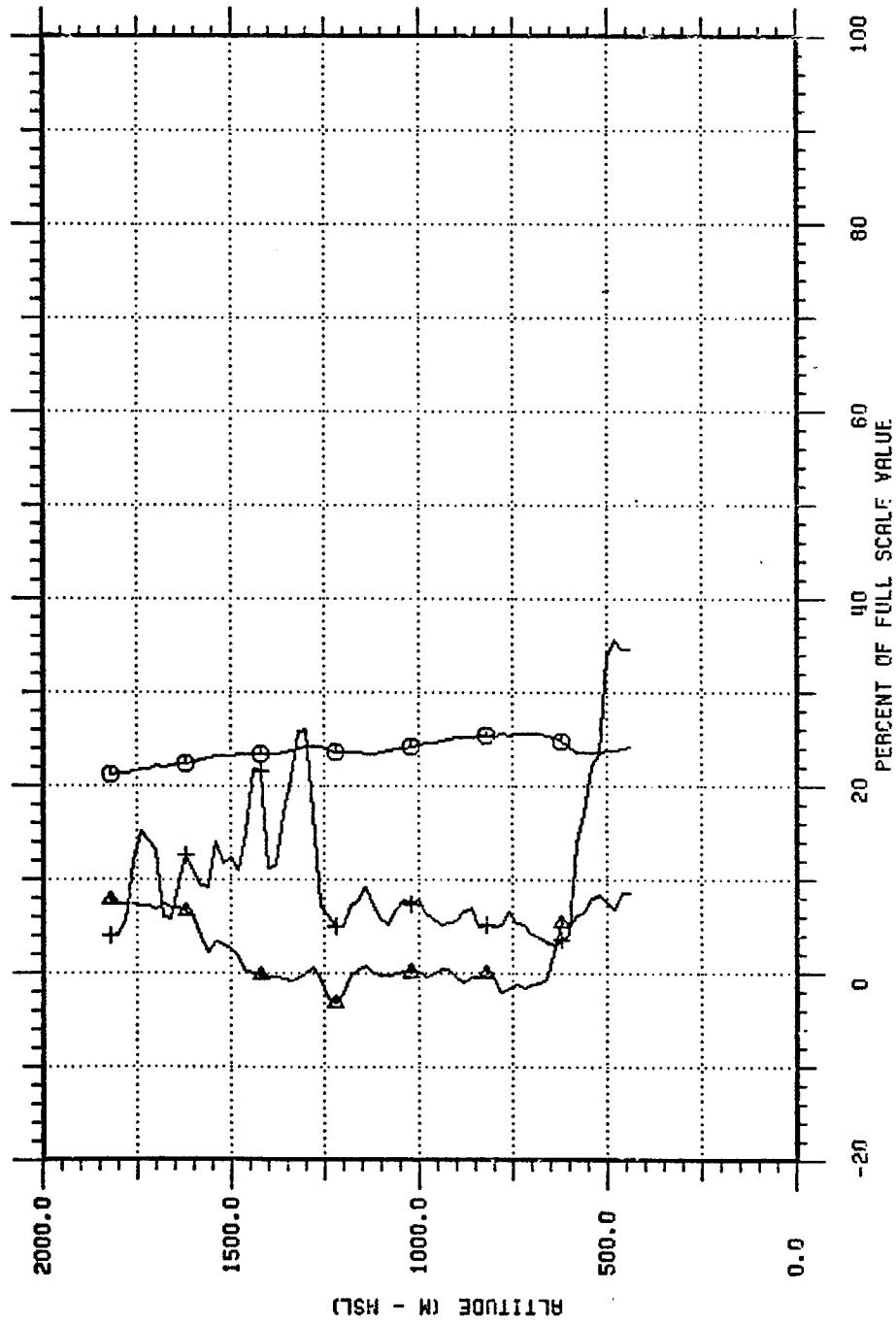
TAPE/PASS: 253/1 DATE: 7 /15/81
TIME: 034 TO 047 (PDT)



800925.1
03:05:41

SED TRANSPORT
SPIRAL AT POINT 1

TAPE/PASS: 253/1 DATE: 7/15/81
TIME: 834 TO 847 (PDT)



890925.1
03:05:41

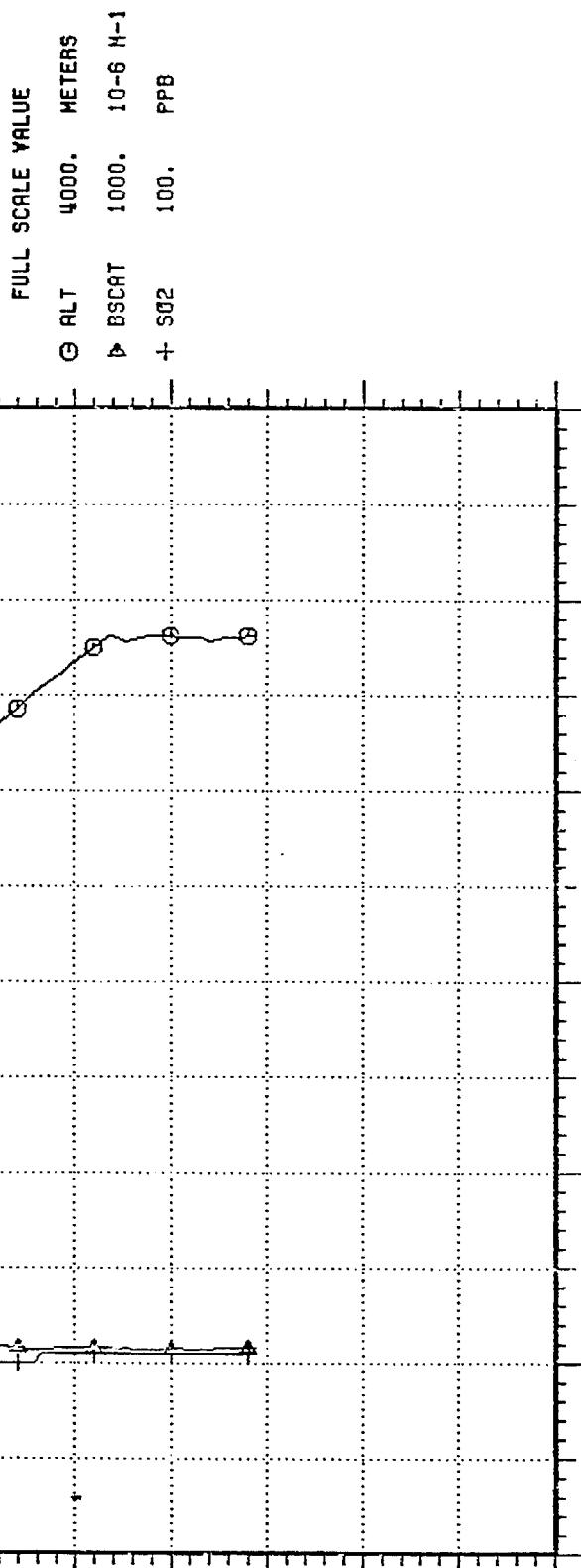
SED TRANSPORT

TRaverse from POINT 1 TO POINT 2 (3048 M MSL)

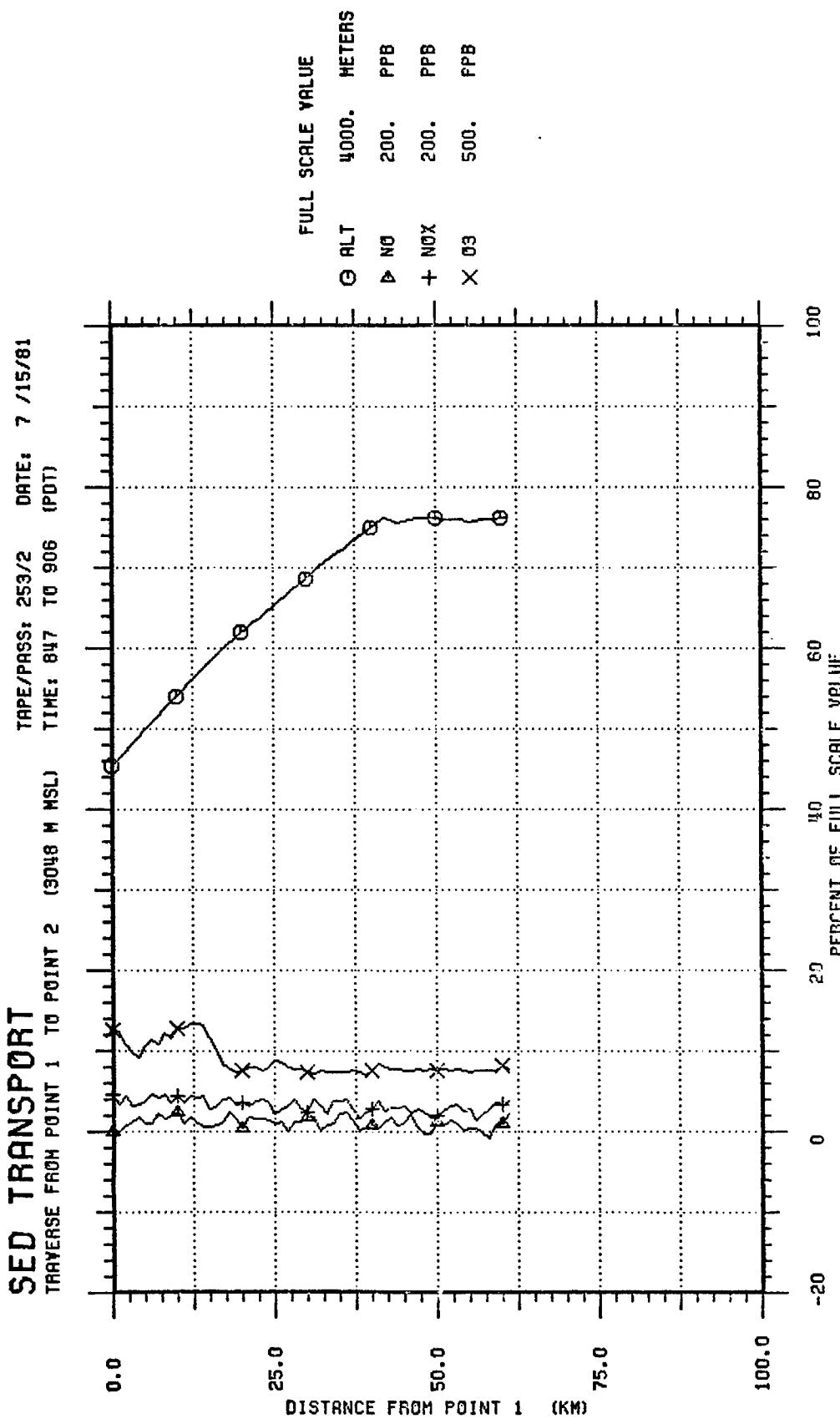
TAPE/PASS: 253/2 DATE: 7/15/81
TIME: 047 TO 906 (PDT)

DISTANCE FROM POINT 1 (KM)

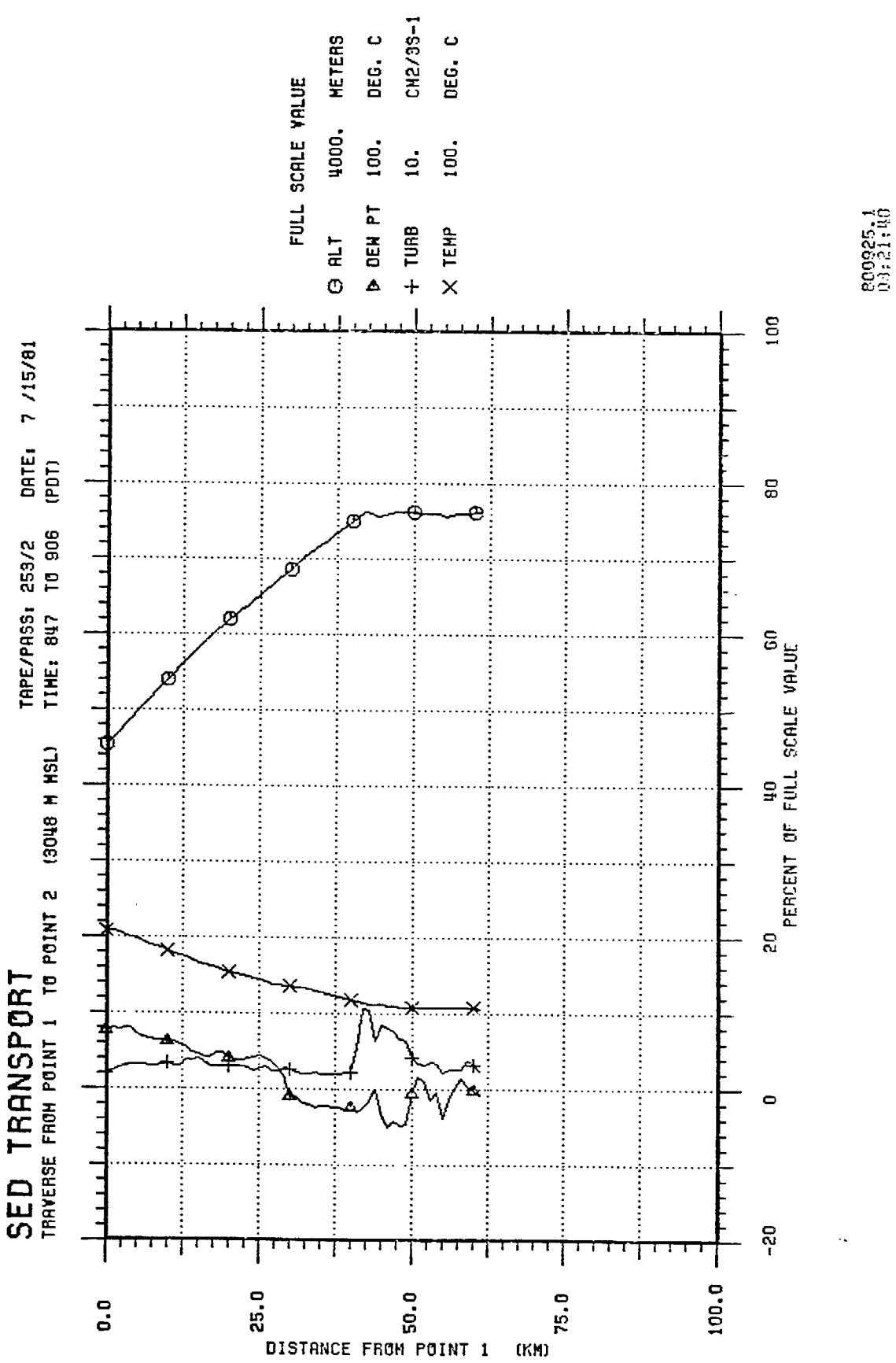
-20 0 20 40 60 80 100
PERCENT OF FULL SCALE VALUE



800925.1
03:21:48

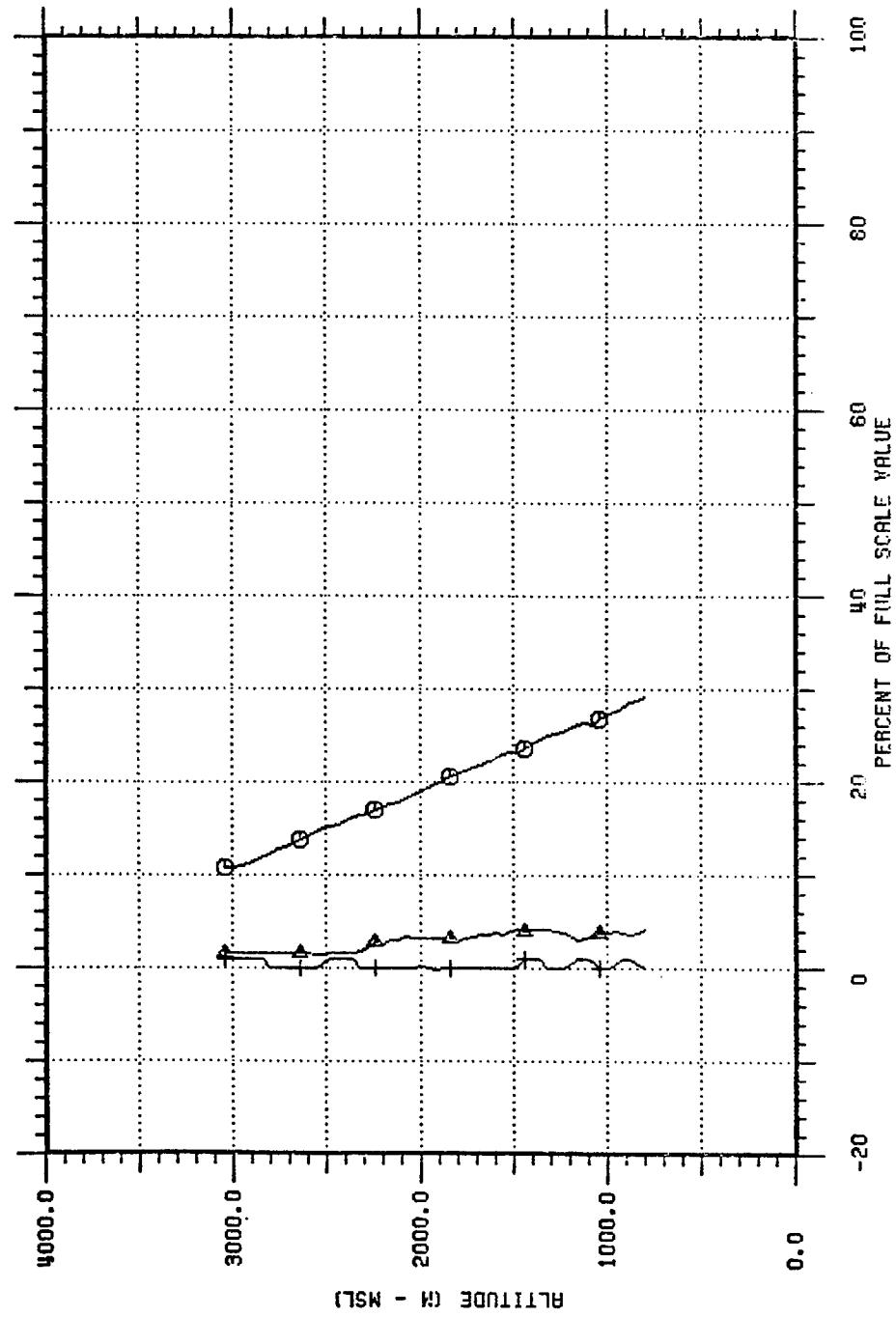


8000025.1
03:21:48



SED TRANSPORT
SPIRAL AT POINT 2

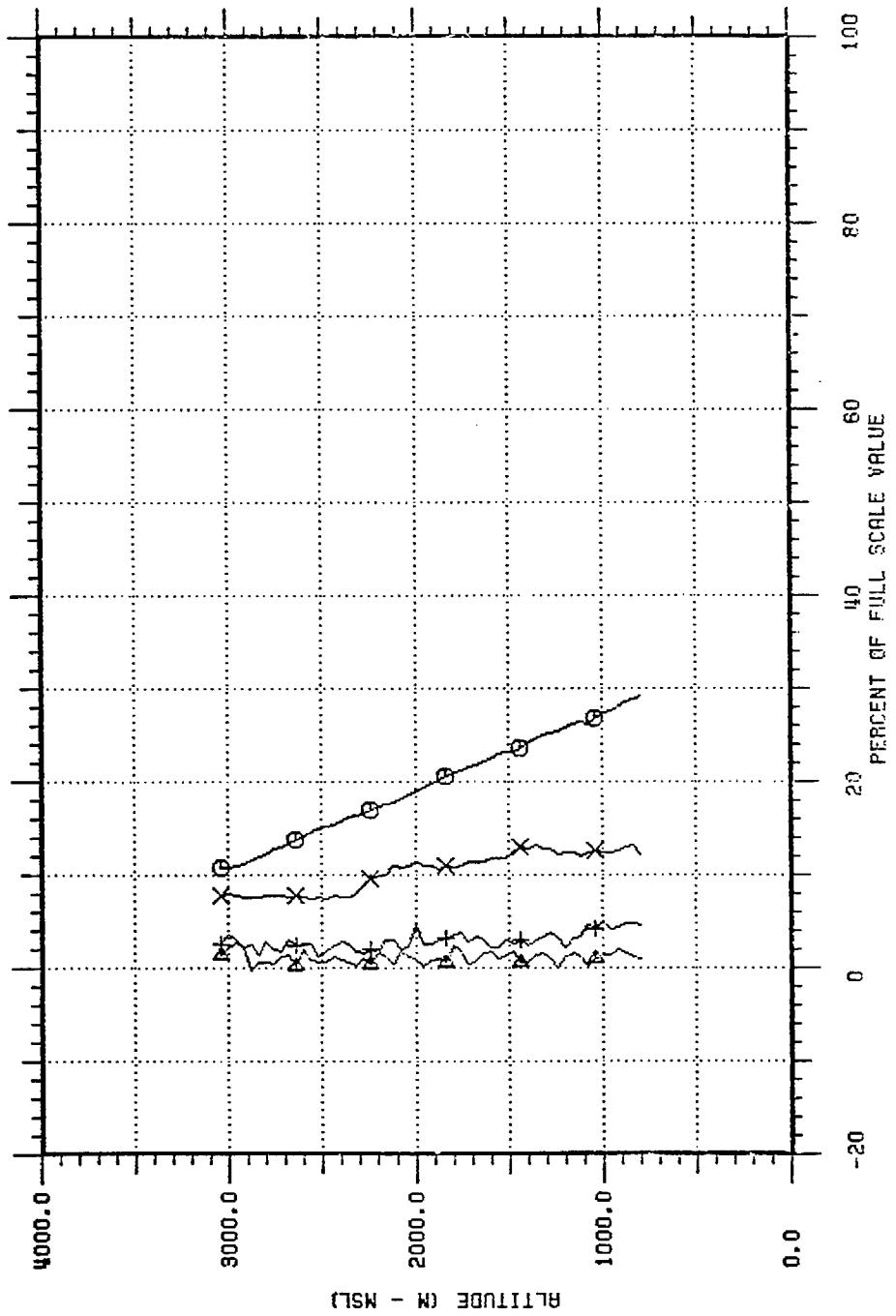
TAPE/PASS: 253/3 DATE: 7 /15/81
TIME: 906 TO 921 (PDT)



800925.1
UG.05:41

SED TRANSPORT
SP1REL AT POINT 2

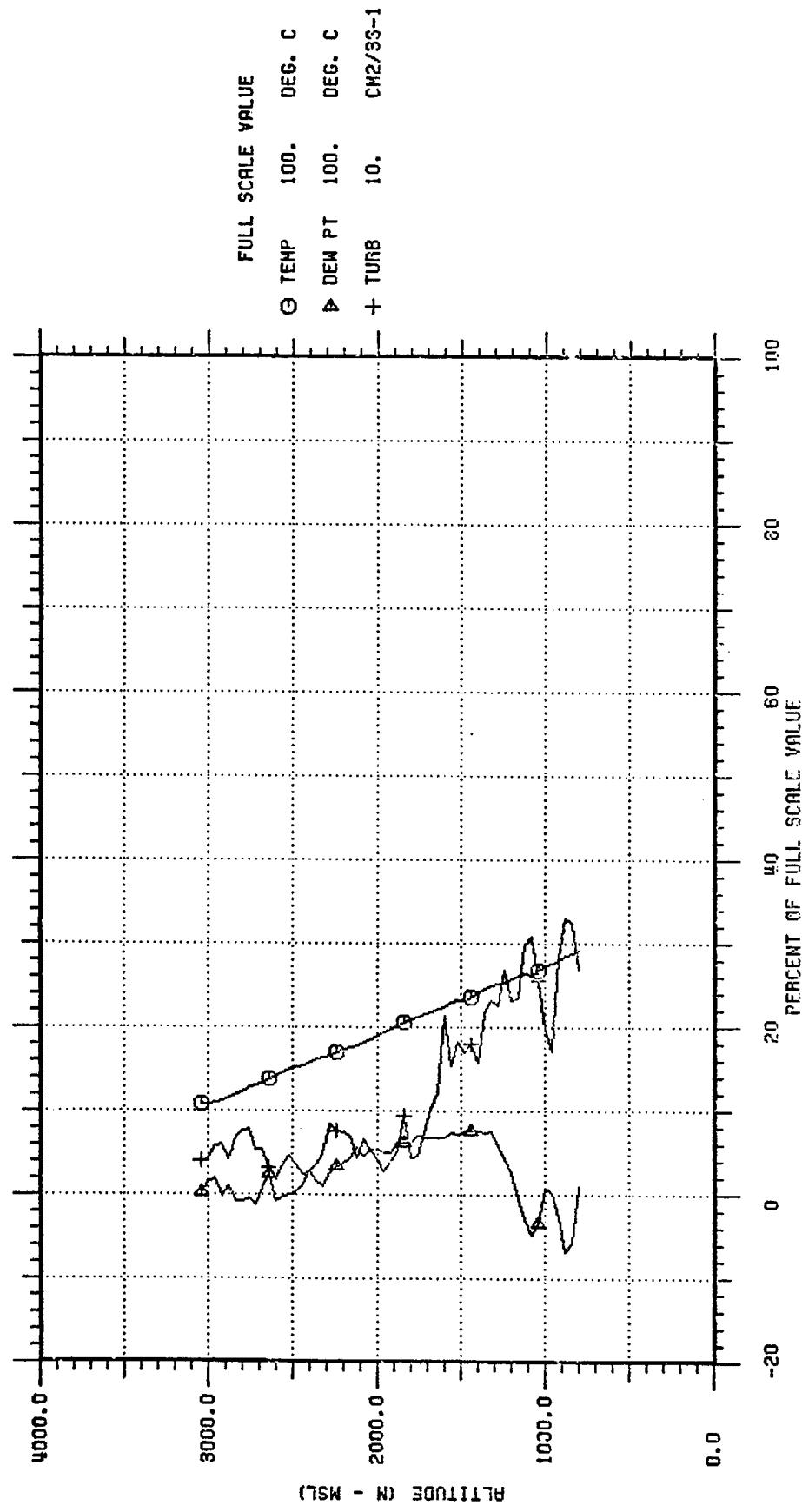
TAPE/PRSS: 253/3 DATE: 7/15/81
TIME: 906 TO 921 (PDT)



800025.1
03:05:41

SED TRANSPORT
SPIRAL AT POINT 2

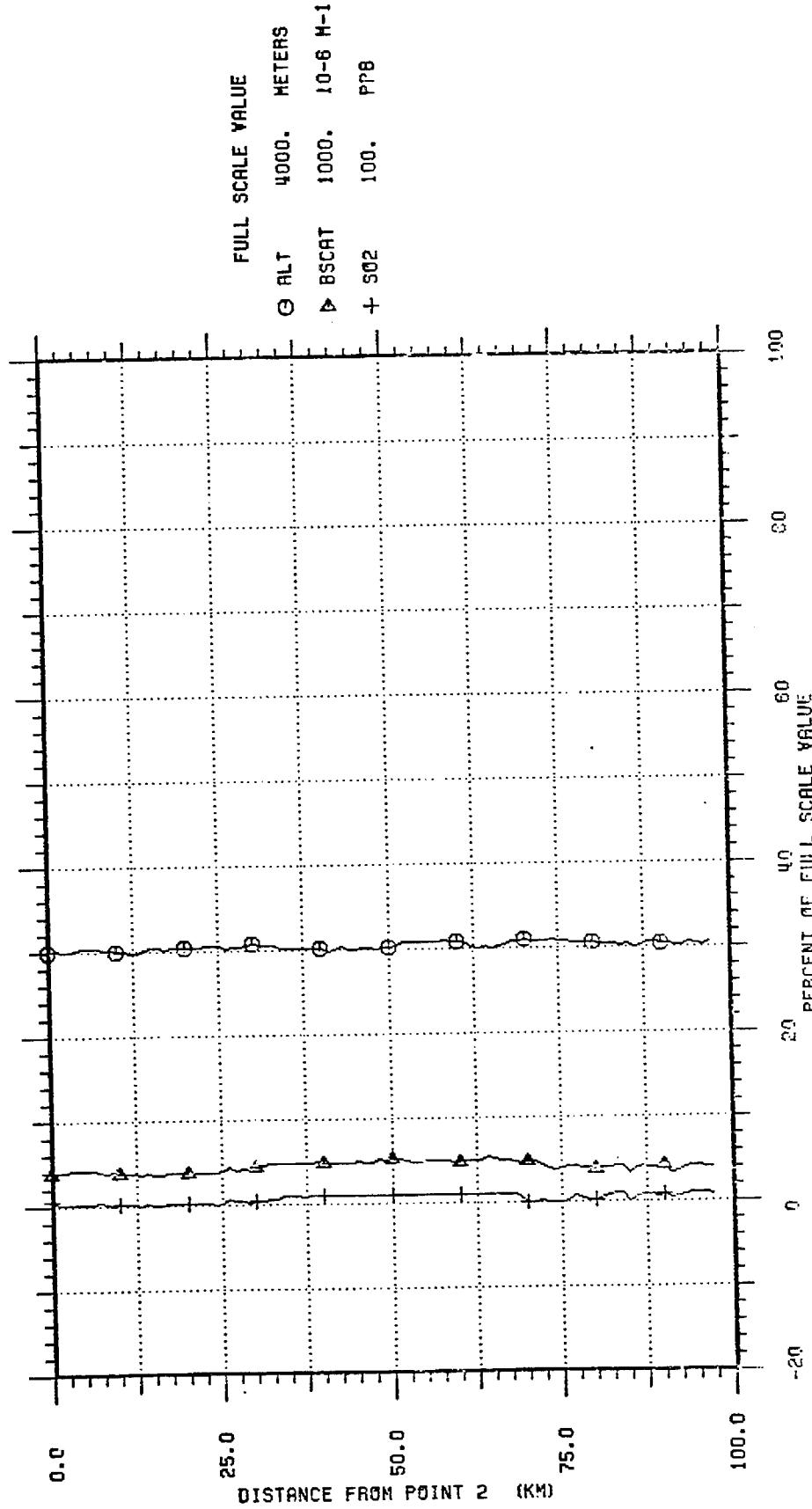
TAPE/PASS: 259/3 DATE: 7/15/81
TIME: 906 TO 921 (PDT)



800925:1
03:05:41

SED TRANSPORT

TAPE/PASS: 253/4 DATE: 7 /15/81
TRaverse from POINT 2 TO POINT 3 (11219 M MSL) TIME: 928 TO 956 (PDT)

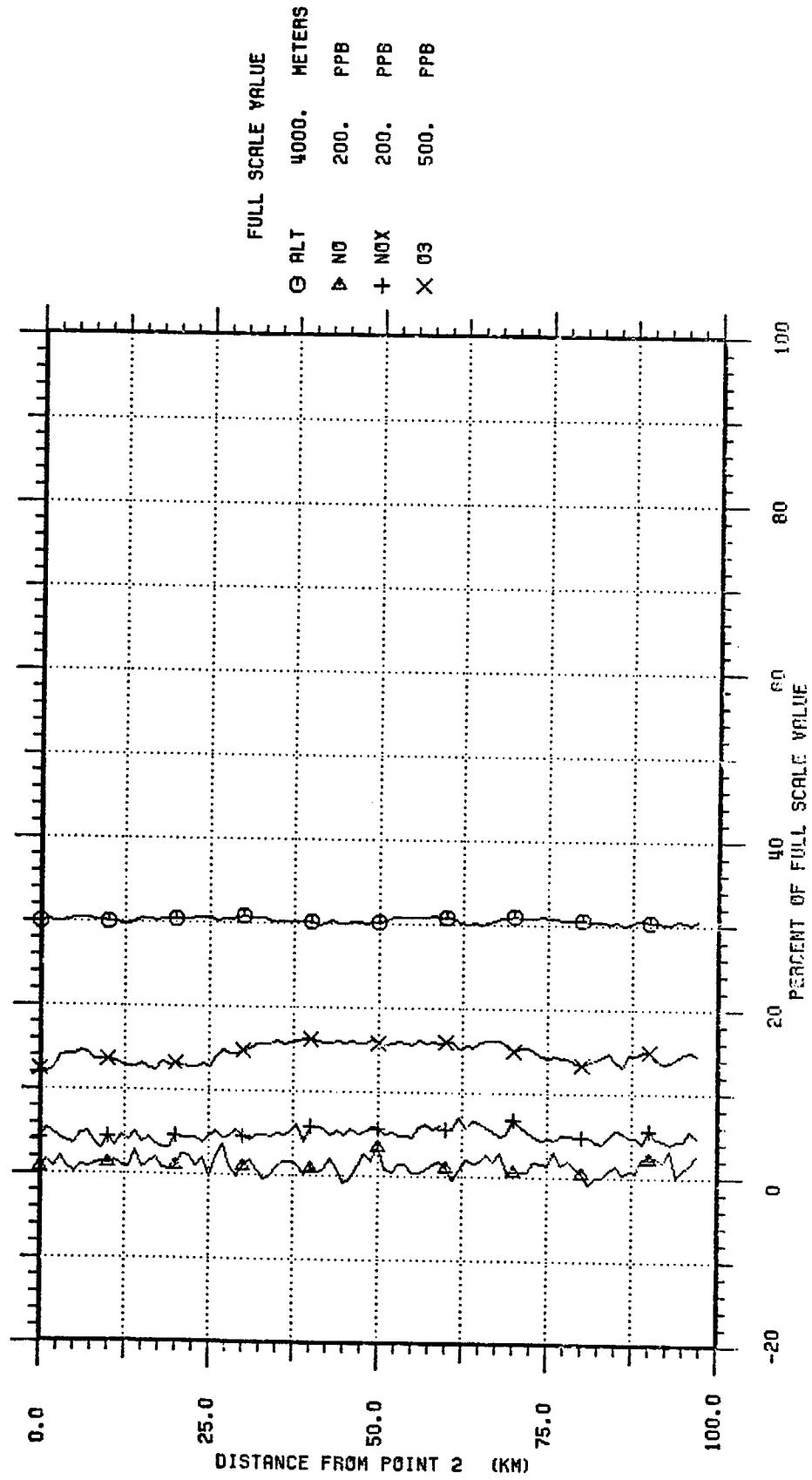


800825.1
03:21:46

SED TRANSPORT

TRAVERSE FROM POINT 2 TO POINT 3 (1219 M MSL)

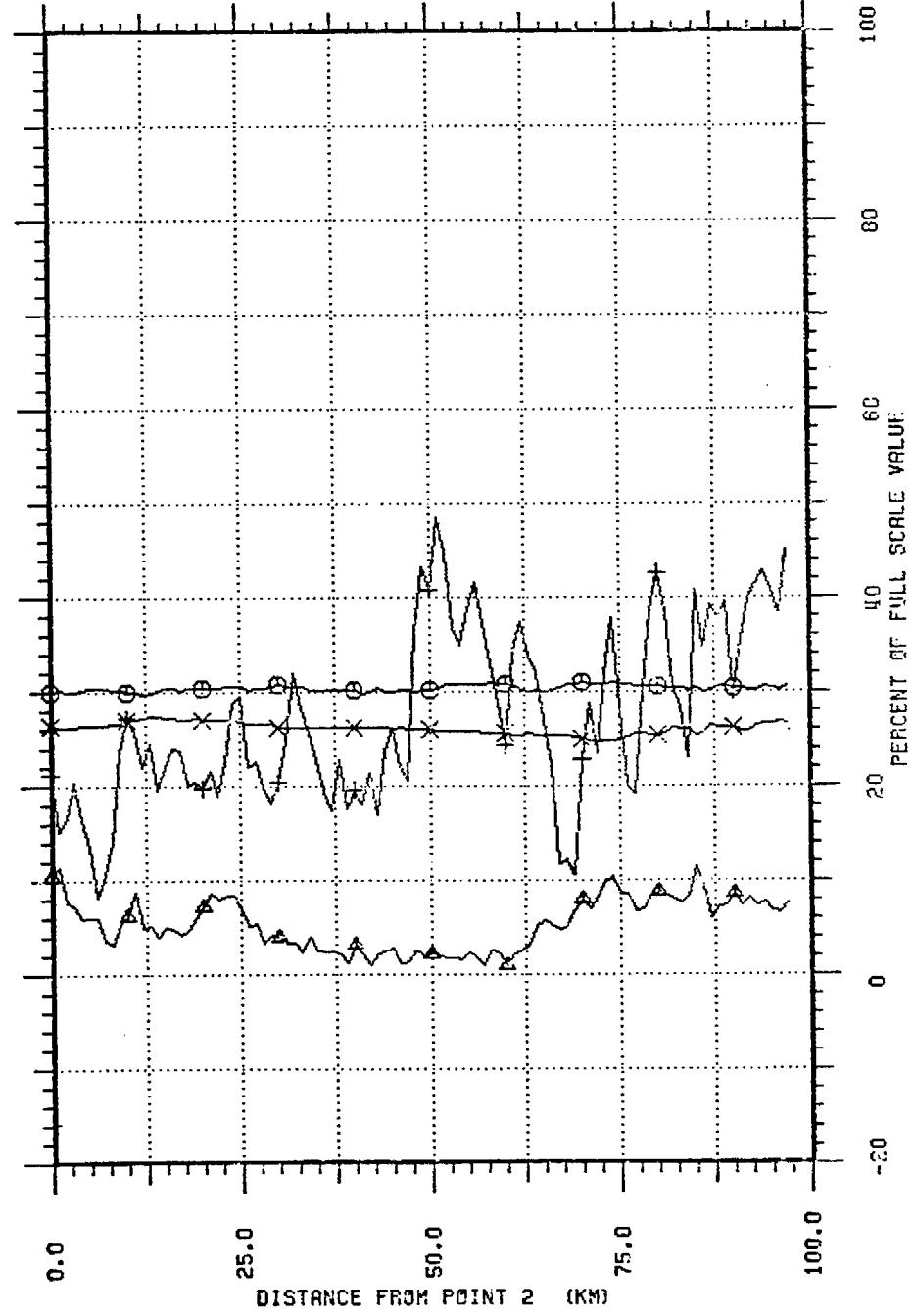
TAPE/PASS: 253/4 DATE: 7/15/81
TIME: 928 TO 956 (FDT)



000725.1
03:21.43

SED TRANSPORT
TRAVERSE FROM POINT 2 TO POINT 3 (11219 M MSL)

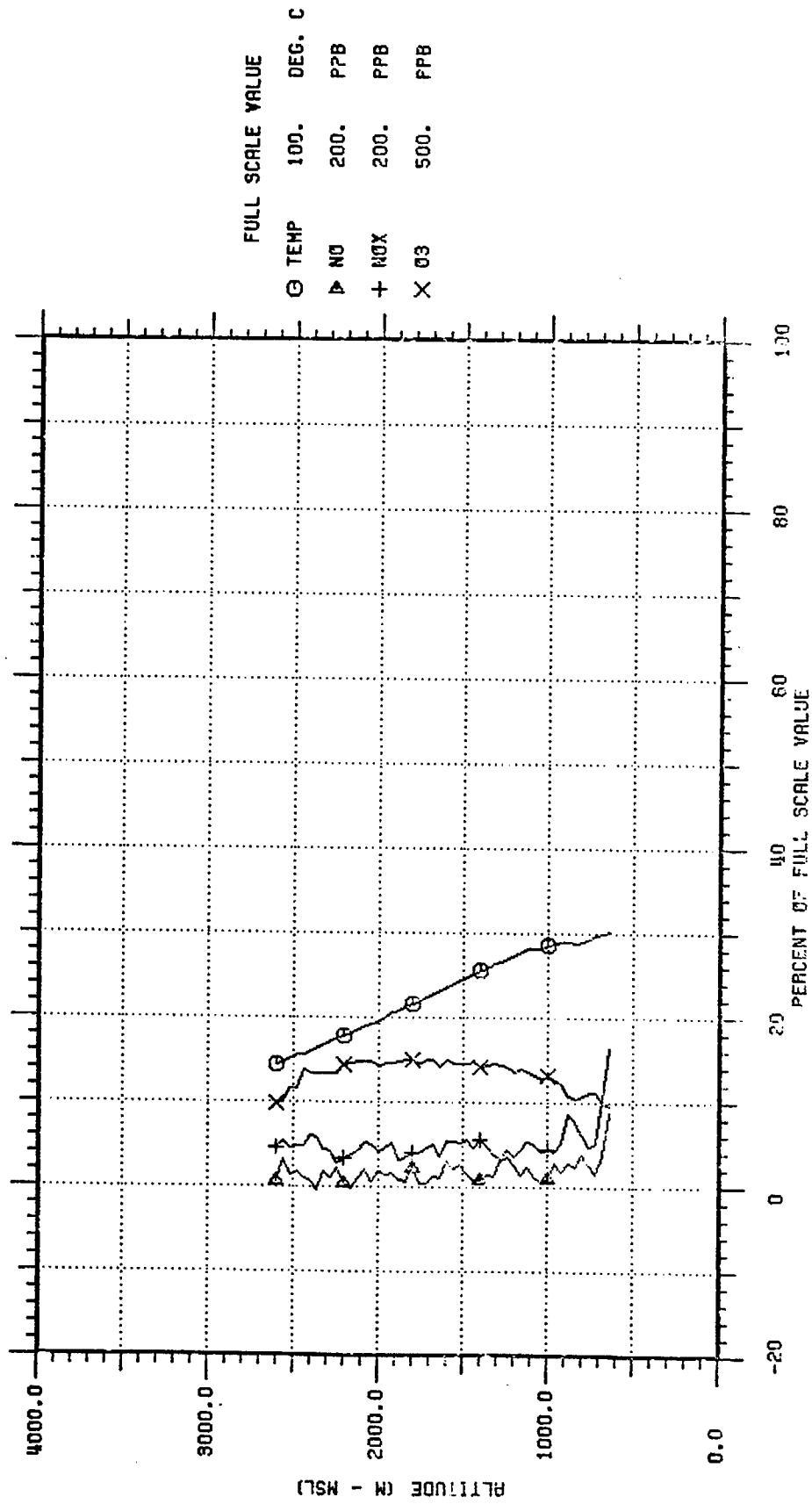
TAPE/PASS: 253/4 DATE: 7 /15/81
TIME: 928 TO 956 (PDT)



600225.1
03:21:48

SED TRANSPORT
SPIRAL AT POINT 3

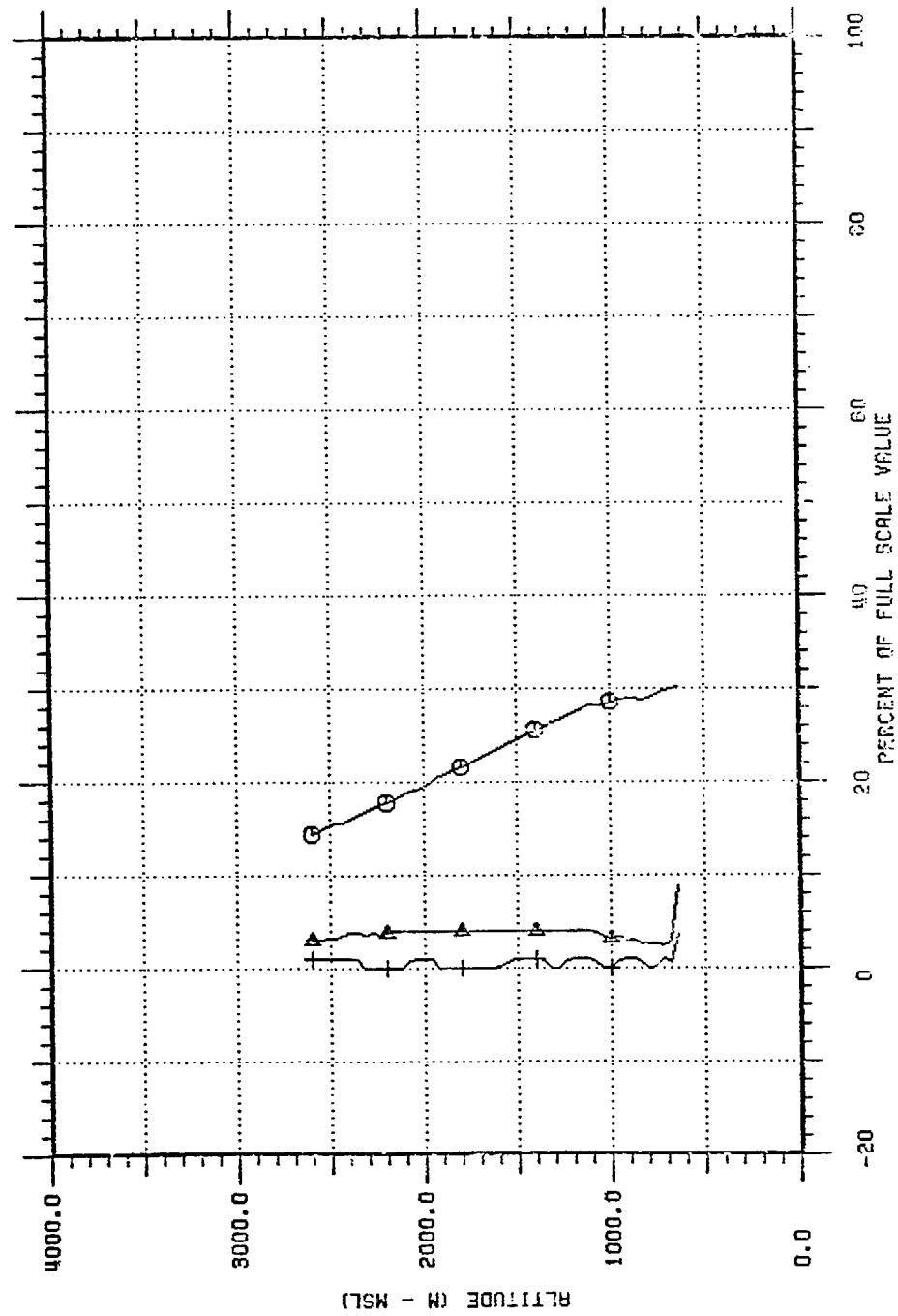
TAPE/PASS: 253/5 DATE: 7 /15/81
TIME: 959 TO 1015 (PDT)



800925.1
G3:05.M1

SED TRANSPORT
SPINNING AT POINT 3

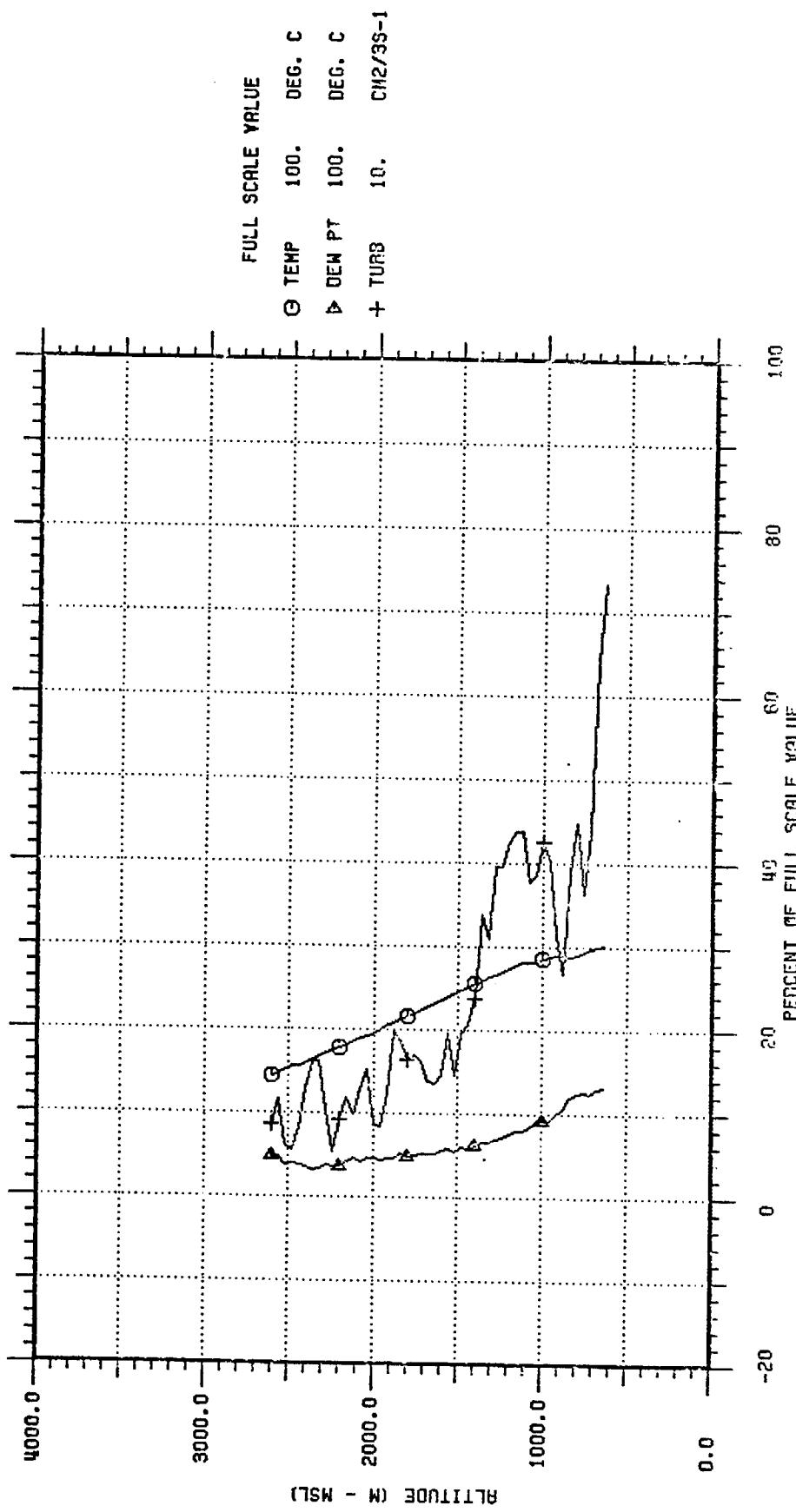
TAPE/PASS: 253/5 DATE: 7/15/81
TIME: 959 T9 1015 (PDT)



800925.1
JG:05.4!

SED TRANSPORT
SAMPLING AT POINT 3

TAPE/PASS: 253/5 DATE: 7 /15/81
TIME: 959 TO 1015 (PDT)



800925.1
06:05:41

TEST 3 - JULY 18-19, 1981

Date: July 18, 1981

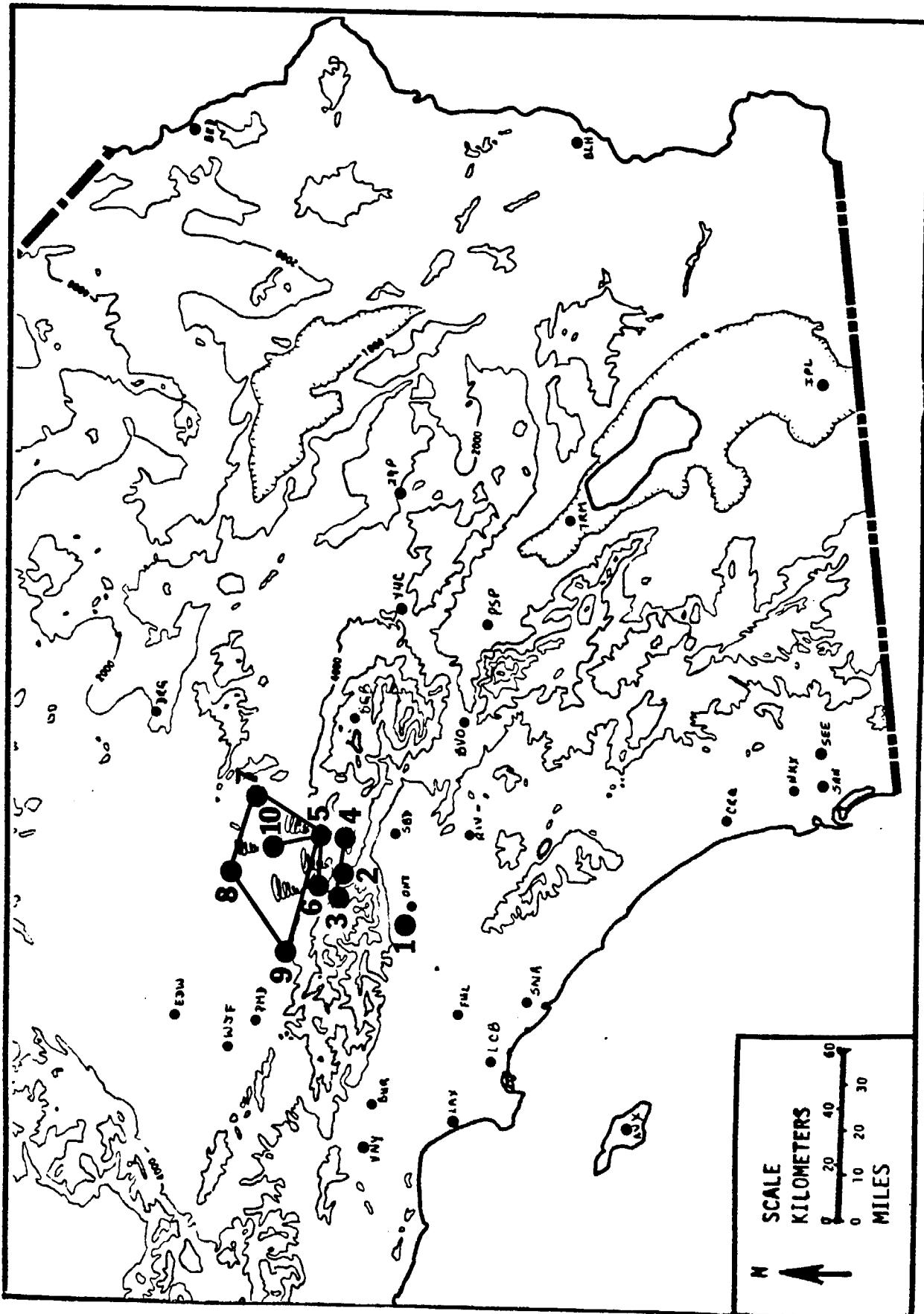
MRI FLIGHT SUMMARY
SOUTHEAST DESERT OZONE TRANSPORT STUDY

Tape #: 254

Pass No.	Sampling Times Start (PDT)	Flight Type	End Points	Sampling Altitude m MSL Start End	Traverse Length or Orbit Time	Tracer Samples	Comments
1	1521	1539	Spiral	1	442-2438	N.A.	D1-14 Sfc Elev = 437 m
2	1549	1607	Spiral	2	3353- 914	N.A.	D15-31 Sfc Elev = 890 m
3	1613	1619	Traverse	3 - 4	1372	16.7 Km.	D32-43 Across Cajon Pass
4	1622	1644	Spiral	5	1036-3353	N.A.	D44-60 Sfc Elev = 1034 m
5	1652	1705	Spiral	6	3353-1250	N.A.	D61-75 Sfc Elev = 1235 m
6	1707	1713	Traverse	6 - 5	1372	21.1 Km.	D76-83
7	1718	1724	Traverse	5 - 7	1372	25.9 Km.	D84-90
8	1725	1733	Traverse	7 - 8	1372	34.6 Km.	D91-99
9	1737	1748	Traverse	8 - 9	1372	38.2 Km.	D100-111
10	1750	1803	Traverse	9 - 5	1372	43.5 Km.	D112-126 El Mirage convergence zone
11	1805	1808	Traverse	5 - 10	1372	16.3 Km.	D127-130
12	1810	1833	Spiral	10	945-3353	N.A.	D131-147 Sfc Elev = 915m
13	1839	1855	Zero Spiral	10	3353- 442	N.A.	Instrument calibration

18 July Tape #254
 TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°07.5'	117°23'	Rialto Airport
2	34°18.8'	117°28.5'	Cajon Junction
3	34°18.5'	117°31.0'	West side of Cajon Pass
4	34°18.0'	117°20.2'	Silverwood Lake
5	34°22.5'	117°18.5'	Hesperia Airport
6	34°22.0'	117°33.0'	West of Cajon Pass over Pear Blossom Hwy.
7	34°35.0'	117°11.0'	Apple Valley Airport
8	34°46.0'	117°29.5'	Sun Hill Ranch
9	34°30.0'	117°46.0'	East of Llano
10	34°31.2'	117°18.8'	Victorville Drive-In



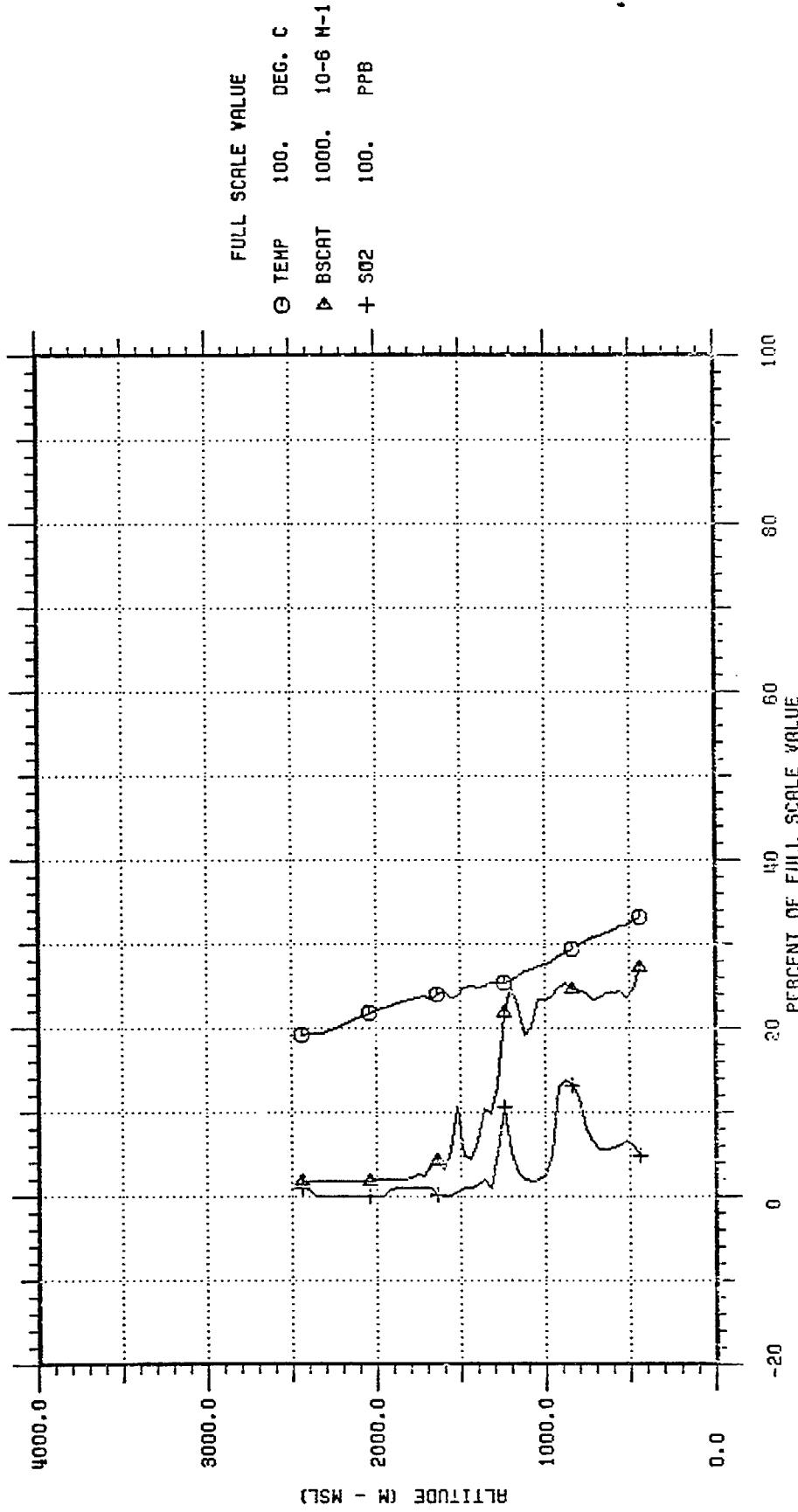
SOUTHEAST DESERT OZONE TRANSPORT STUDY

MRI SAMPLING FLIGHT

Tape #254
July 18, 1981

SED TRANSPORT
SPIRAL AT POINT 1

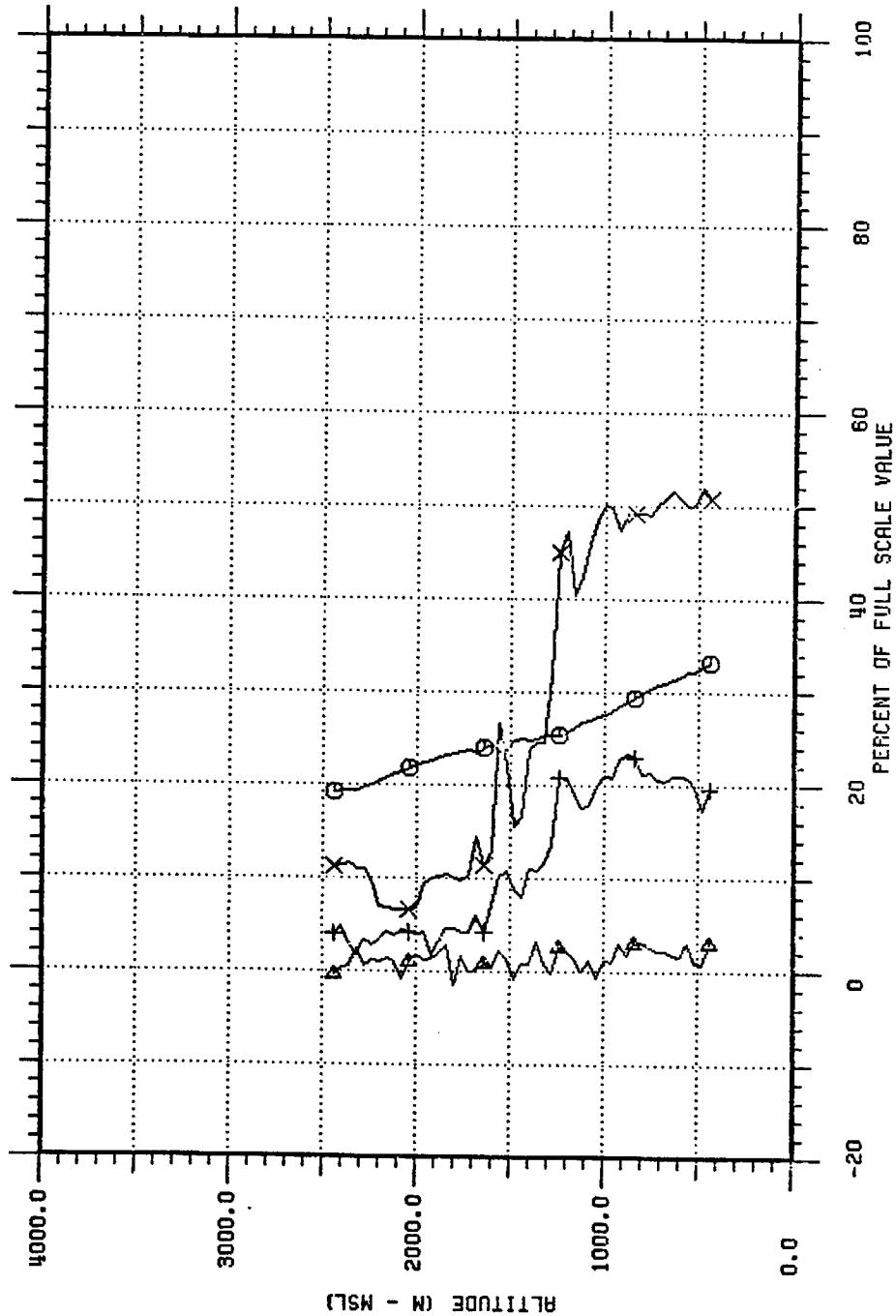
TAPE/PASS: 254/1 DATE: 7 /18/81
TIME: 1521 TO 1539 (PDT)



011001.1
06:13:06

SED TRANSPORT
SPIRAL AT POINT 1

TAPE/PASS: 254/1 DATE: 7/18/81
TIME: 1521 TO 1539 (PDT)

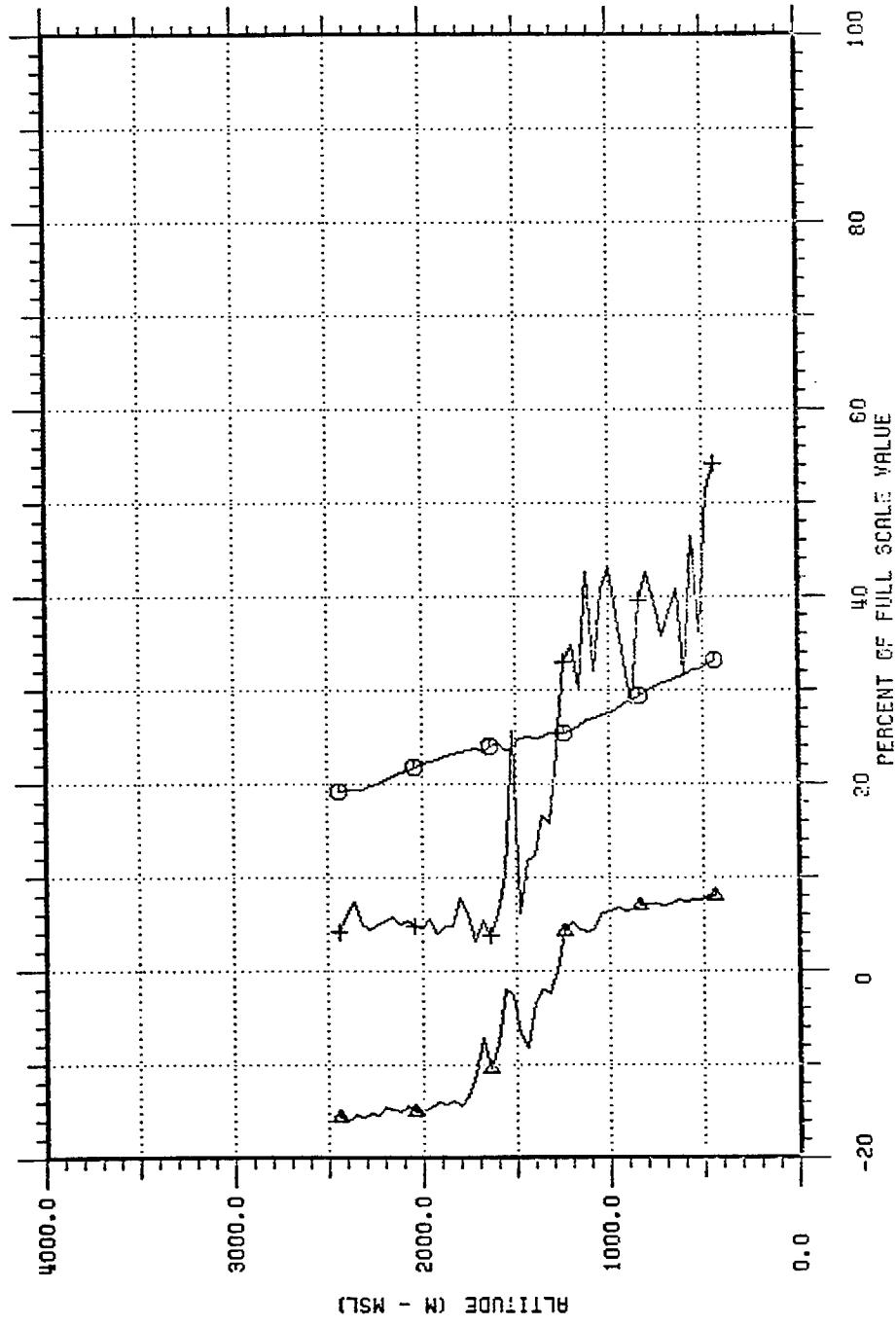


811001.1
06:46:06

C
4
C

SED TRANSPORT
SPIRAL AT POINT 1

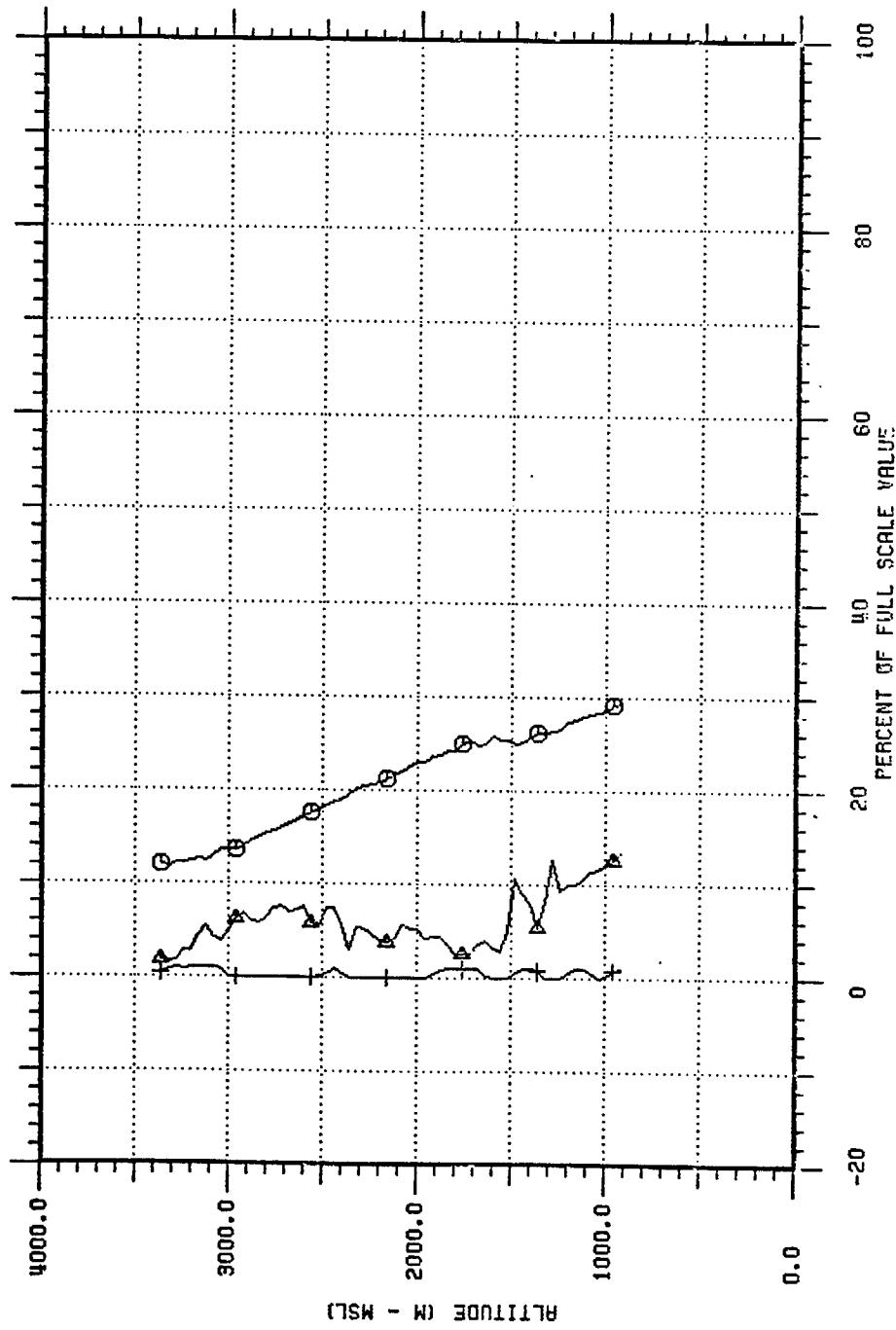
TAPE/PASS: 254/1 DATE: 7 /18/81
TIME: 1521 TO 1539 (PDT)



811001.1
06:48:06

**SED TRANSPORT
SPIRAL AT POINT 2**

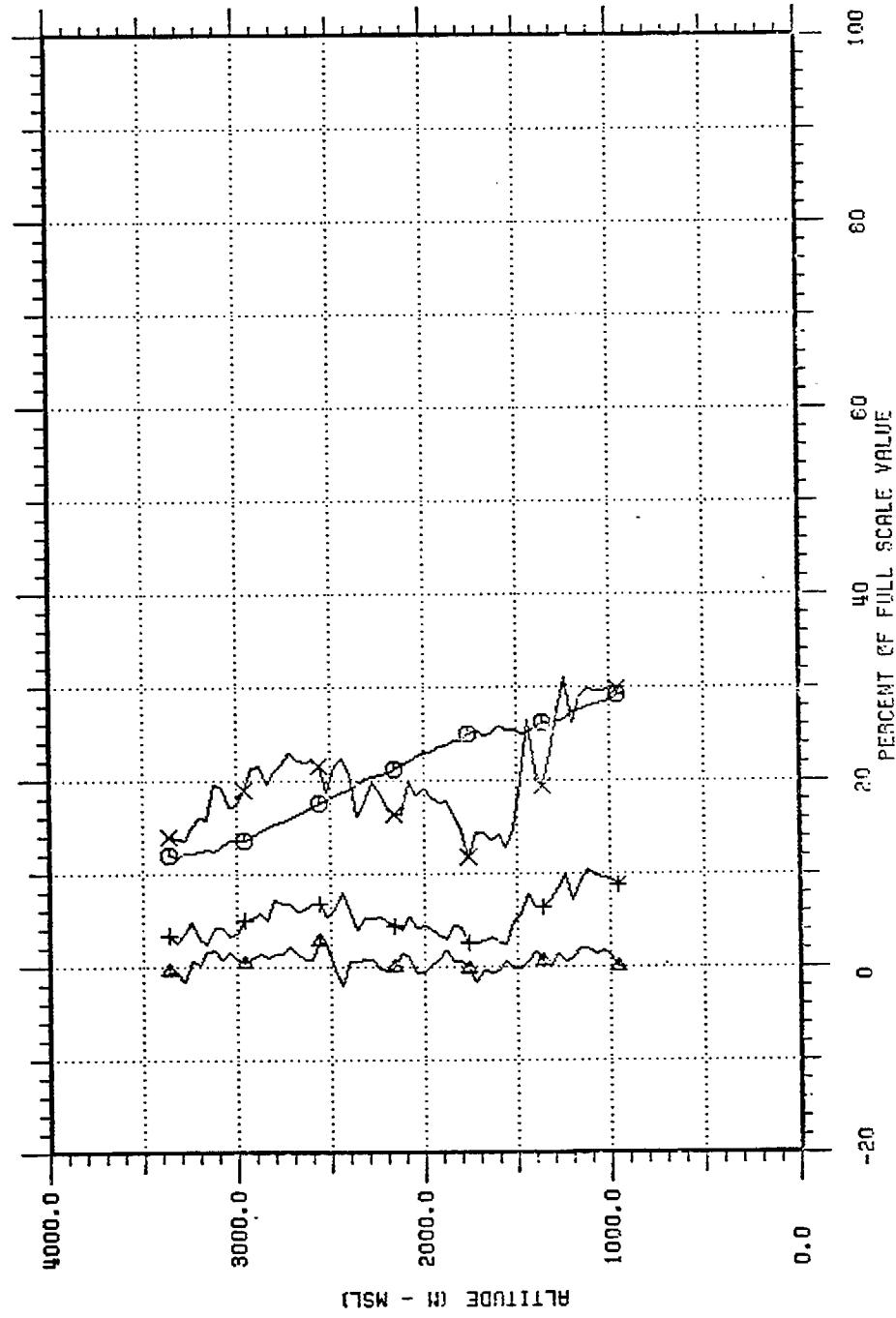
TAPE/PASS: 254/2 DATE: 7 /13/81
TIME: 1549 TO 1607 (PDT)



811001.1
06:48:06

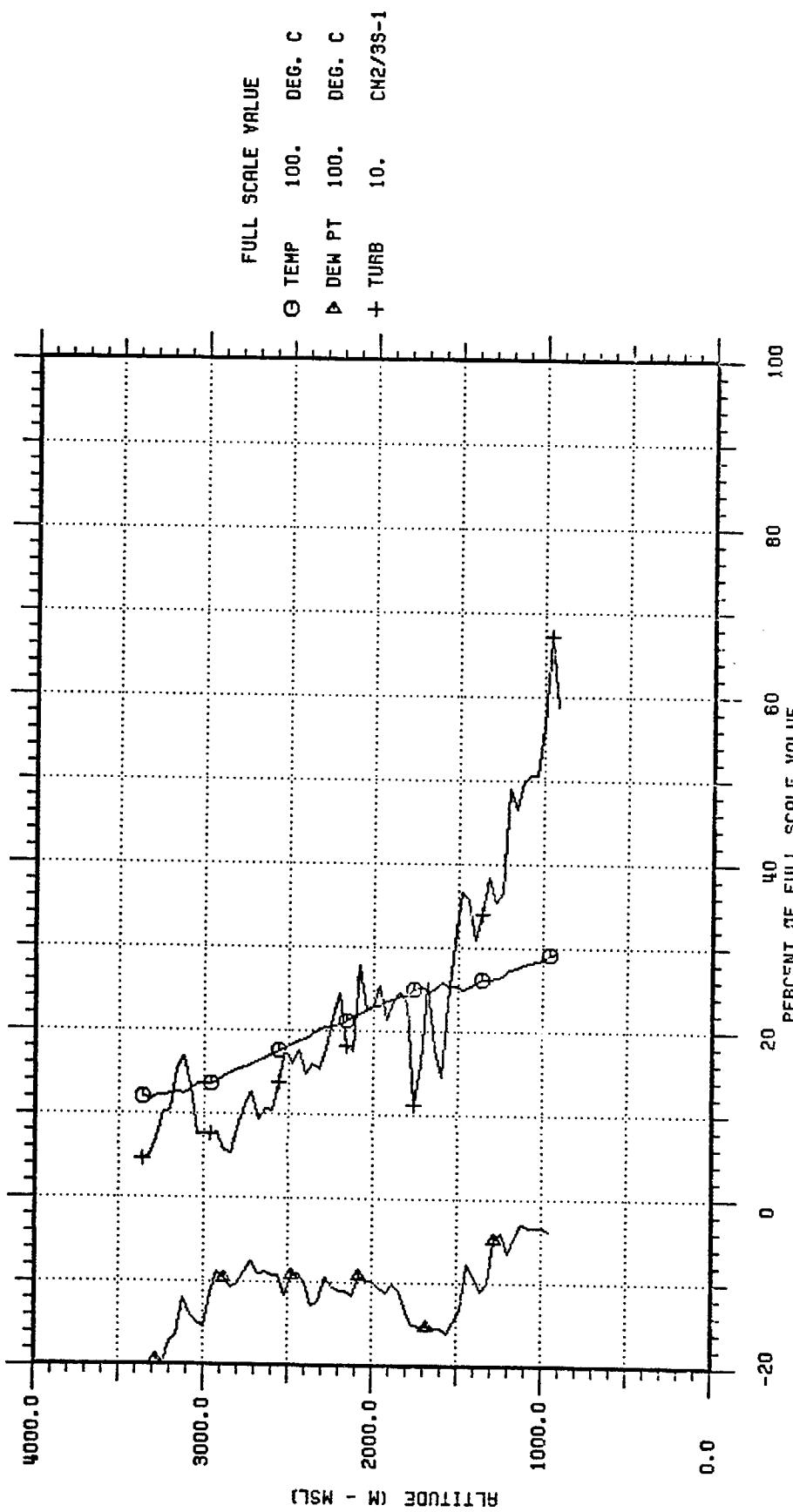
SED TRANSPORT
SP1R1AL AT POINT 2

TAPE/PASS: 254/2 DATE: 7 /18/81
TIME: 1549 TO 1607 (PDT)



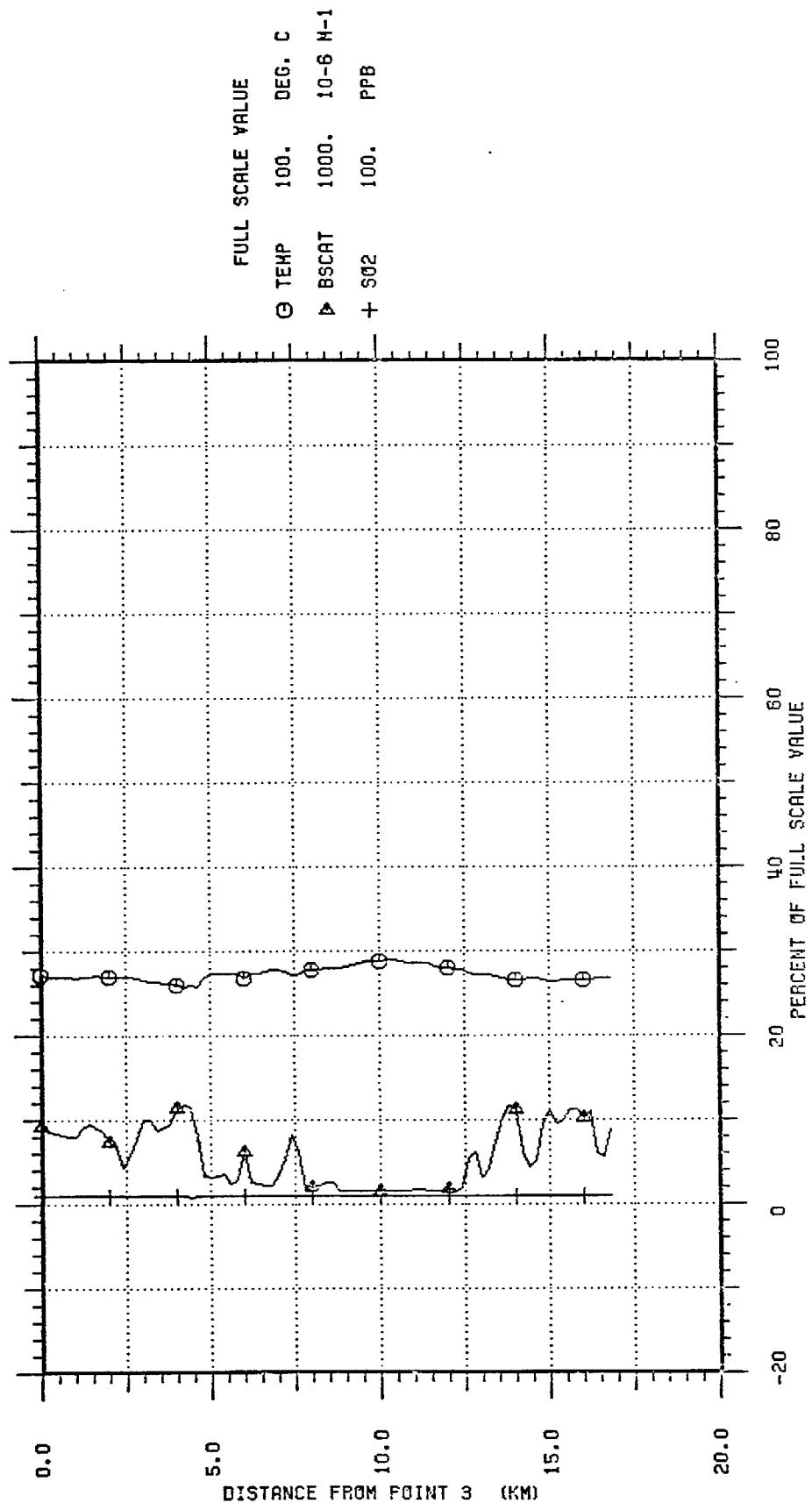
811001.1
06:46:06

TAPE/PASS: 254/2 DATE: 7 /19/81
TIME: 1549 TO 1607 (PDT)
SPIRAL AT POINT 2



811001.1
06:16:06

SED TRANSPORT
TRaverse from Point 3 to Point 4 (1372 m MSL) TAPE/PASS: 254/3 DATE: 7/18/81
TIME: 1613 TO 1619 (PDT)

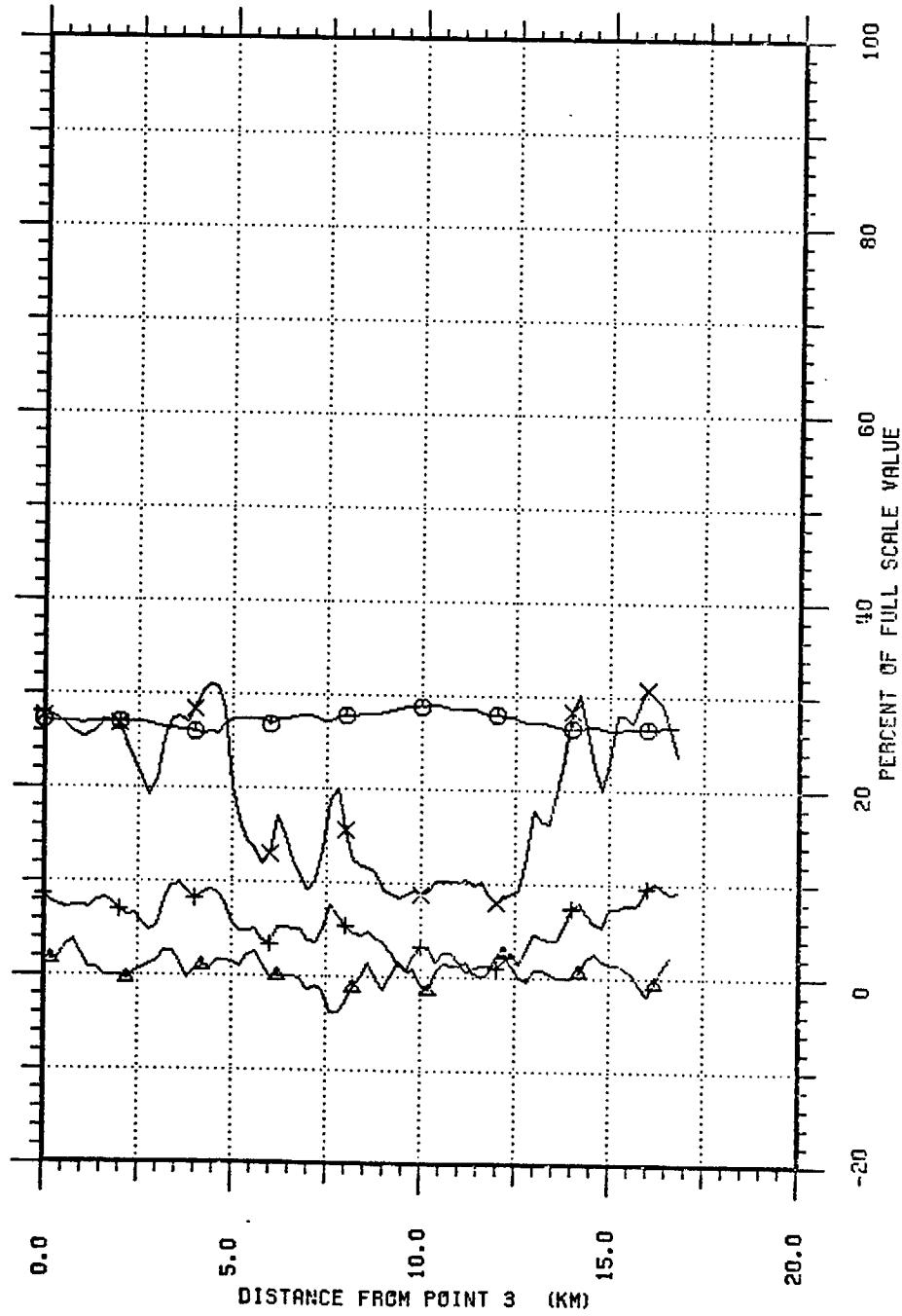


811001.1
06:46:06

SED TRANSPORT

TRaverse from POINT 3 TO POINT 4 (11372 M MSL)

TAPE/PASS: 254/3 DATE: 7 /18/81
TIME: 1613 TO 1619 (PDT)



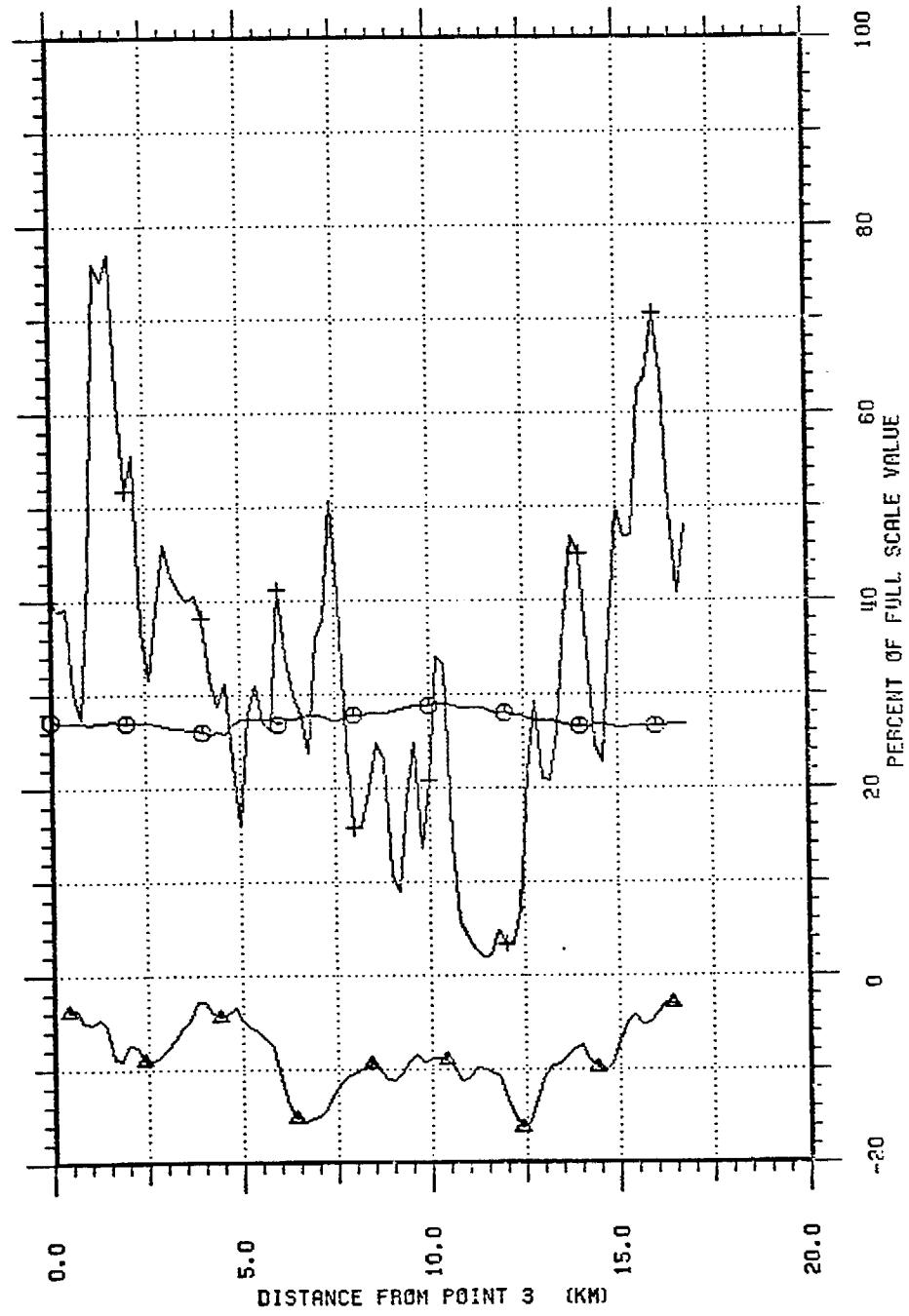
811001.1
06:46:06

SED TRANSPORT

TRAVERSE FROM POINT 3 TO POINT 4 (1372 M NSL)

TAPE/PASS: 254/3 DATE: 7/18/81

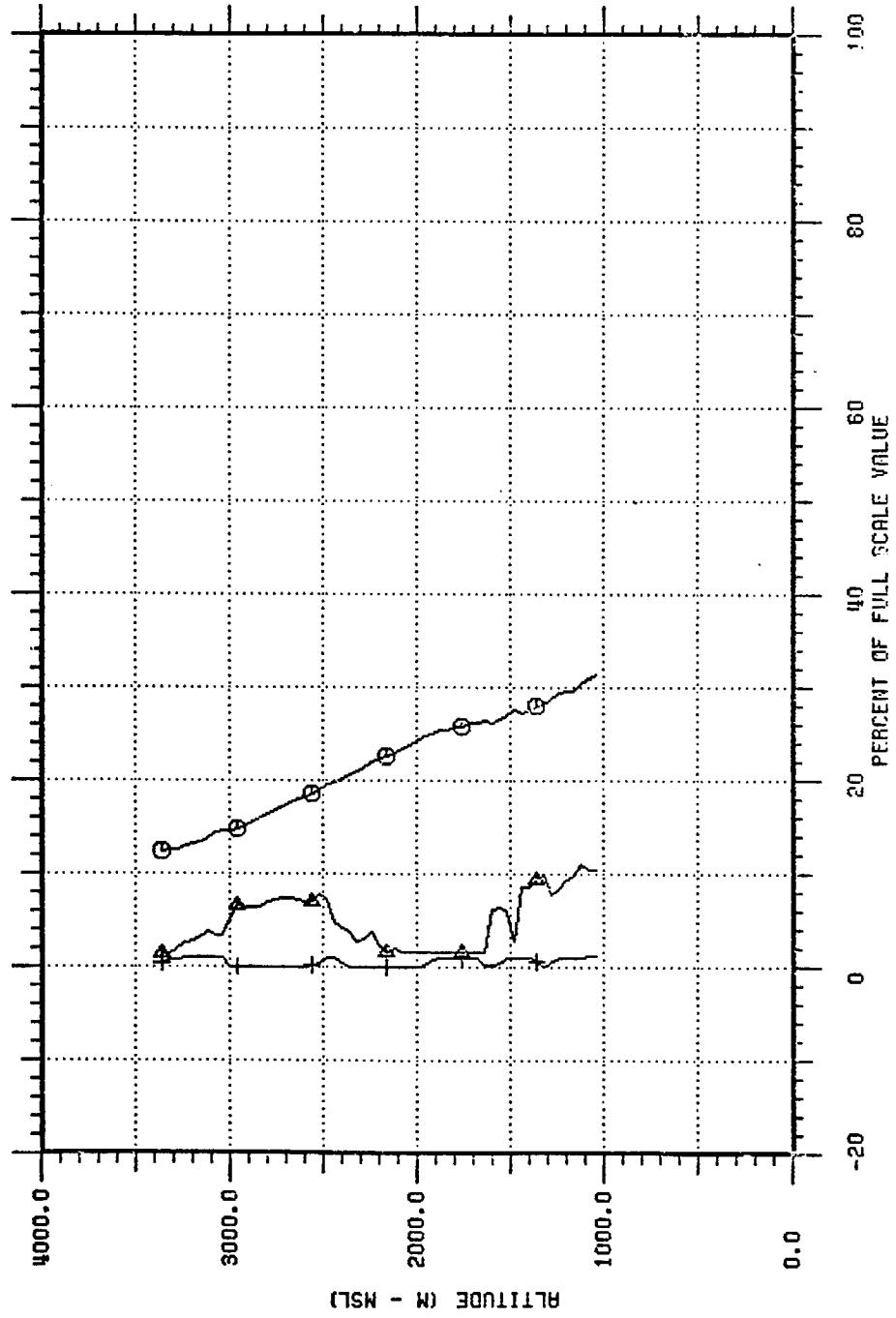
TIME: 1613 TO 1619 (PDT)



611001.1
06:43:06

SED TRANSPORT
SPECTRAL AT POINT 5

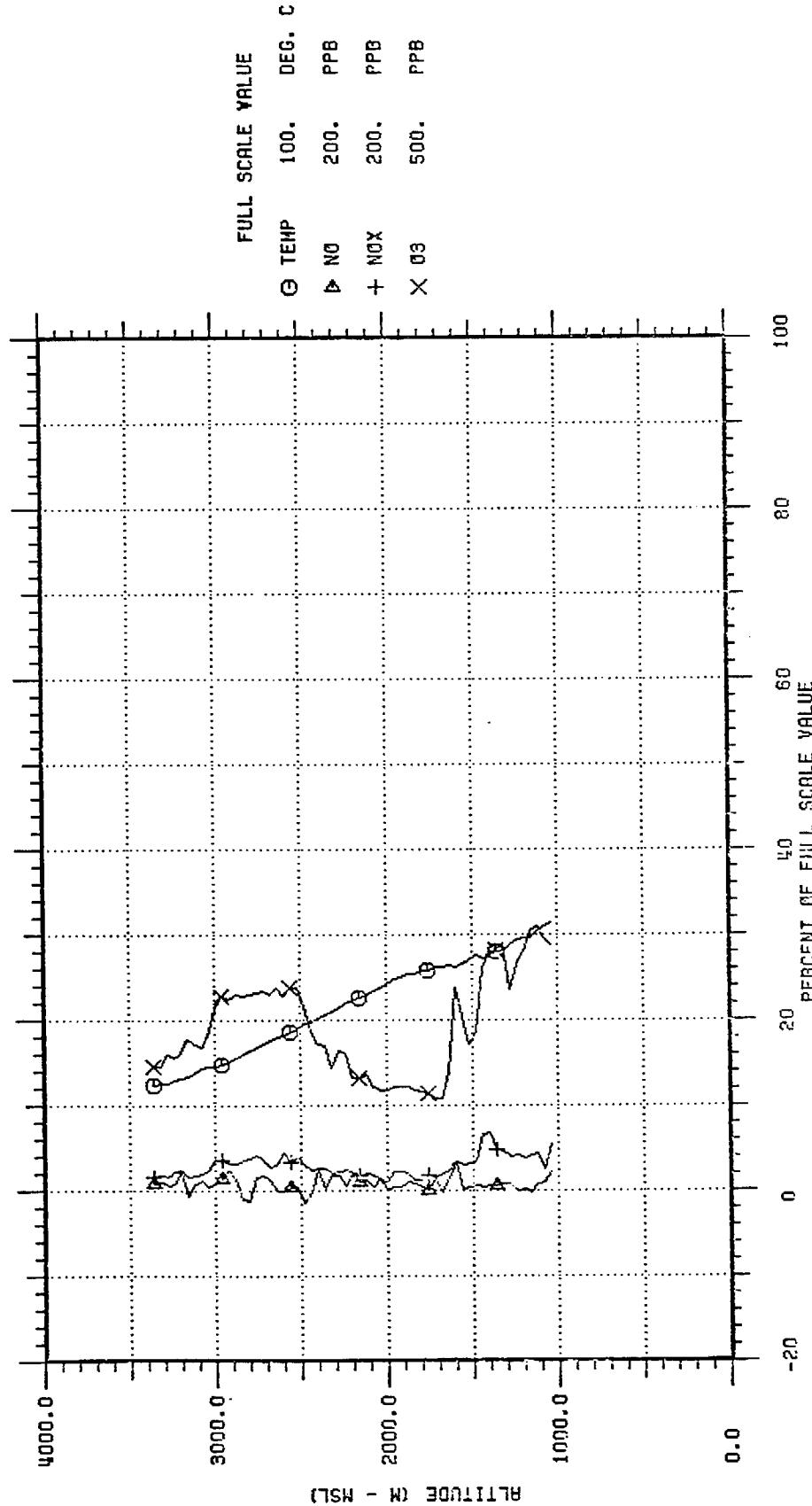
TAPE/PASS: 254/4 DATE: 7 /18/81
TIME: 1622 TO 1644 (PDT)



211001.1
06:18:26

SED TRANSPORT
SPIRAL AT POINT 5

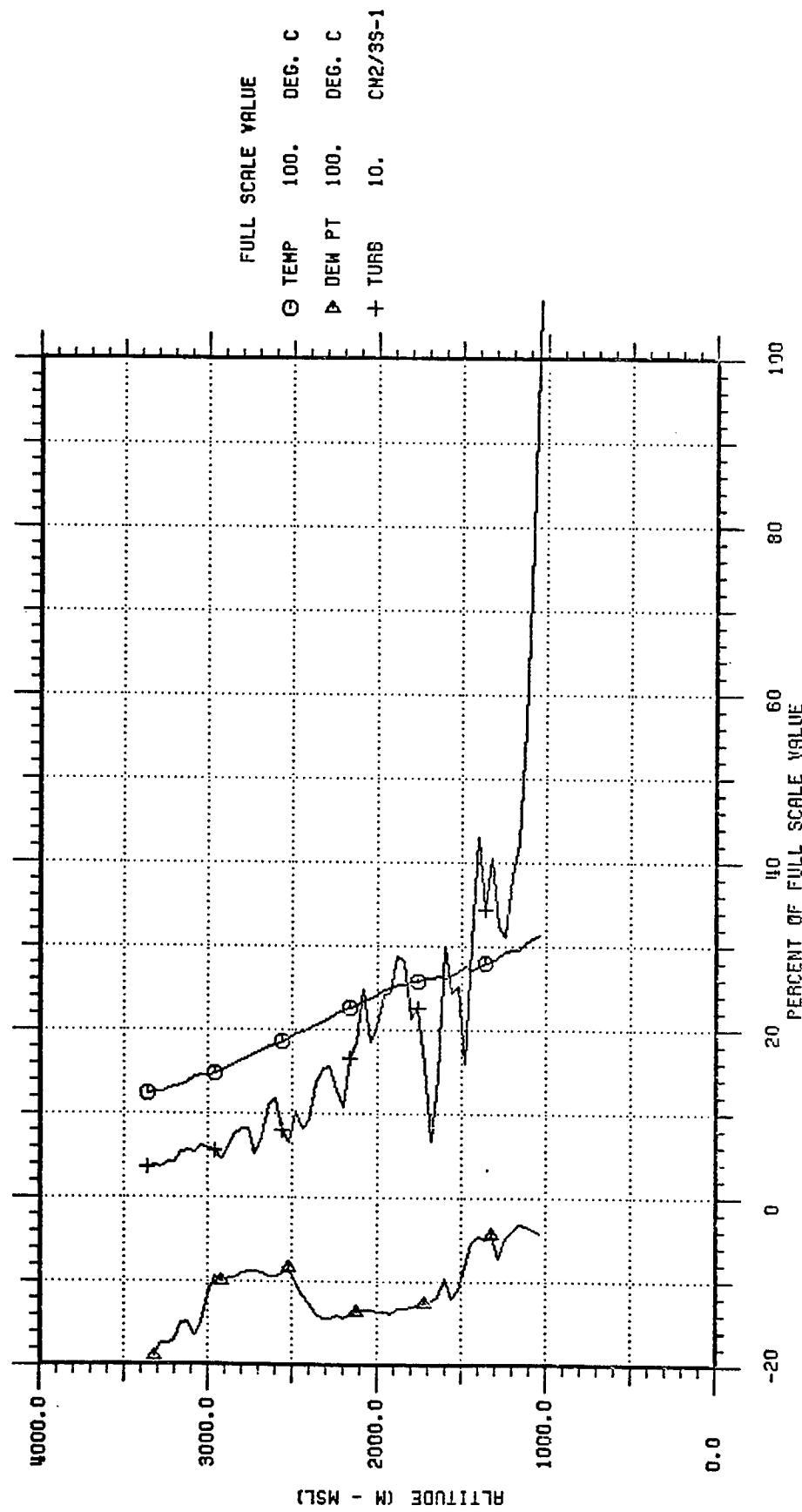
TAPE/PASS: 254/4 DATE: 7 /18/81
TIME: 1622 TO 1644 (PDT)



811001.1
06:48:06

SED TRANSPORT
SP1ARL AT POINT 5

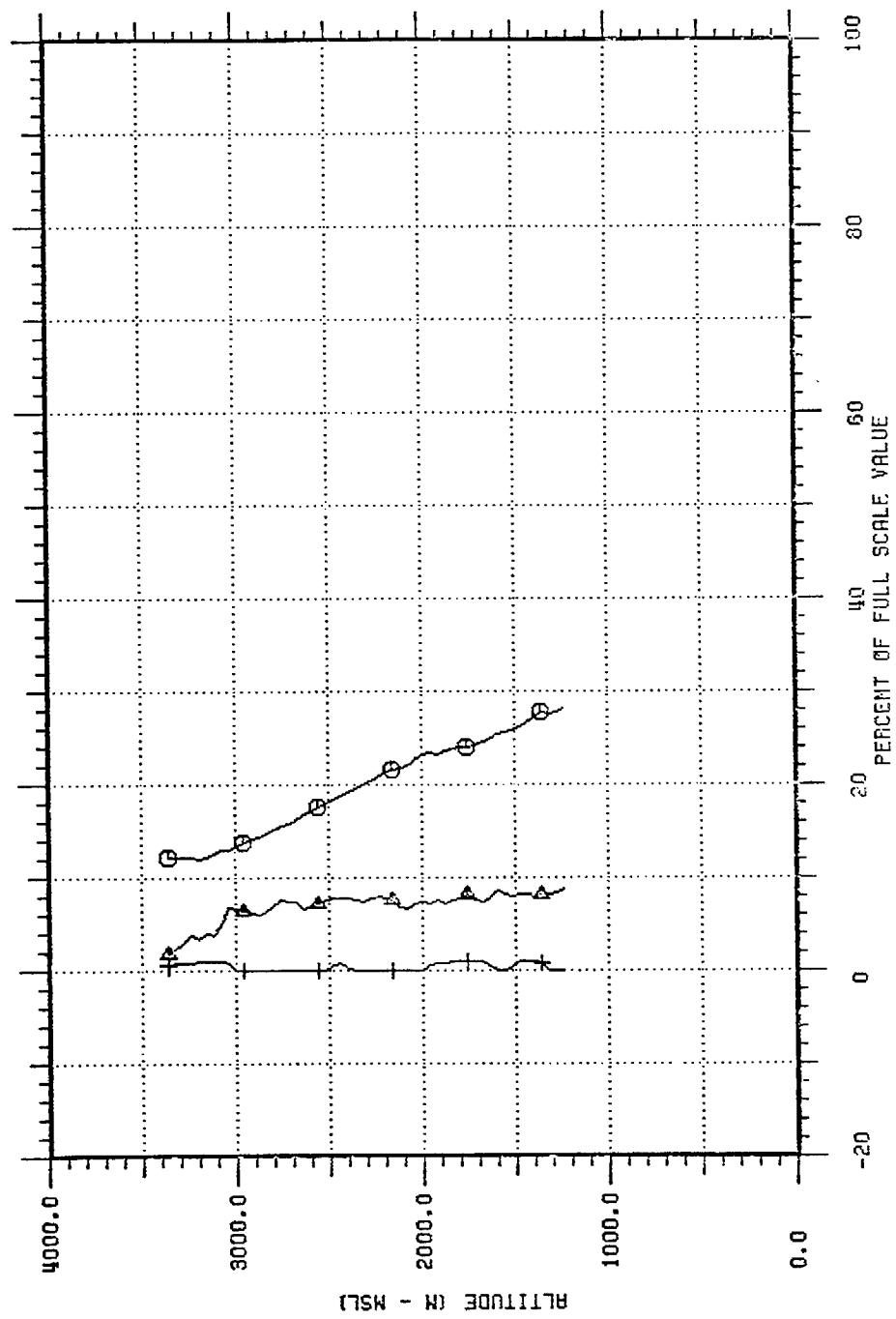
TRAVE/PASS: 254/4 DATE: 7 /18/81
TIME: 1622 TO 1644 (PDT)



811001.1
06:48:06

SED TRANSPORT
SPIRAL AT POINT 6

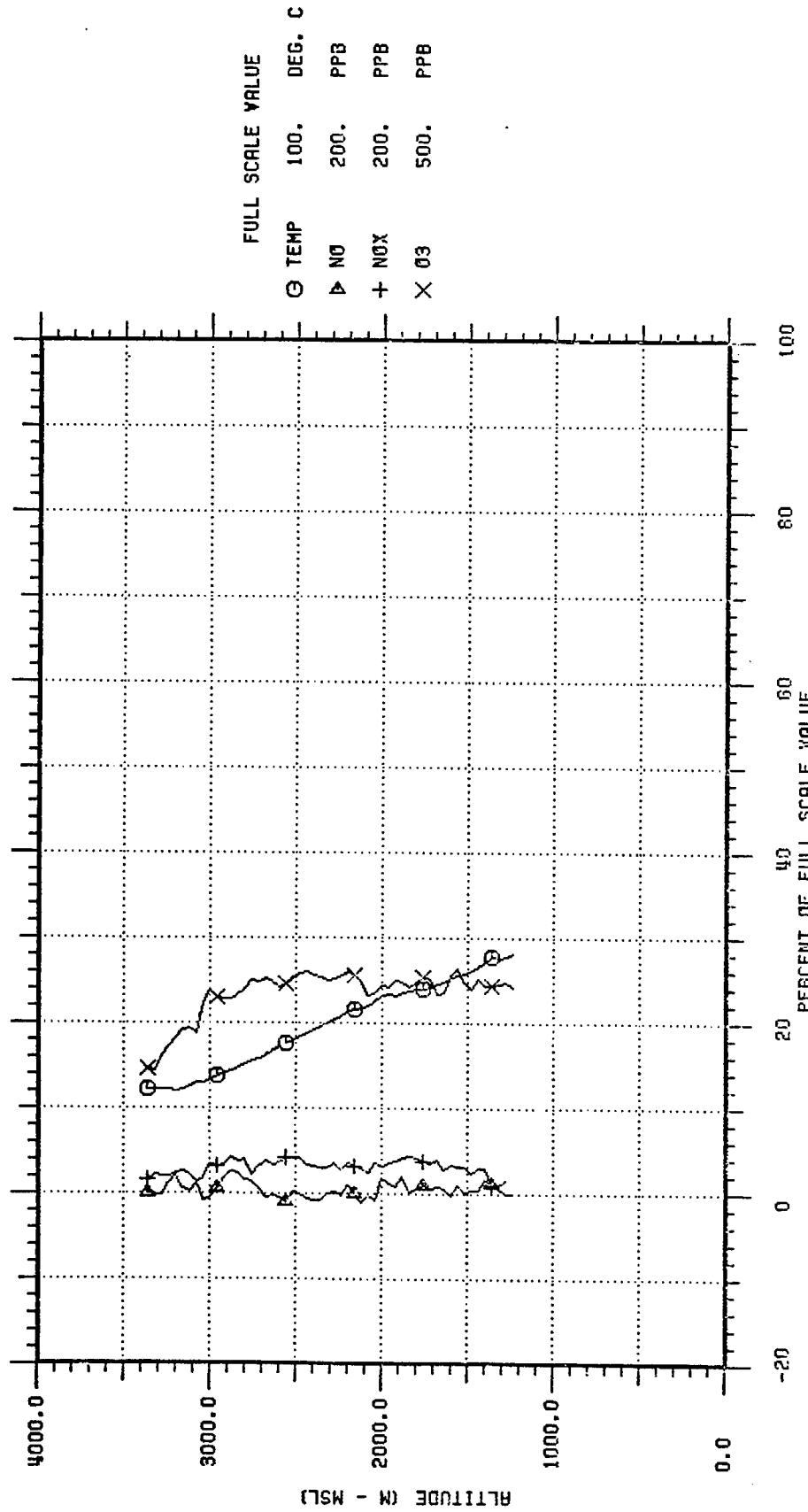
TAPE/PASS: 254/5 DATE: 7/18/81
TIME: 1652 TO 1705 (PDT)



811001.1
CG:1G:06

SED TRANSPORT
Spiral at Point 6

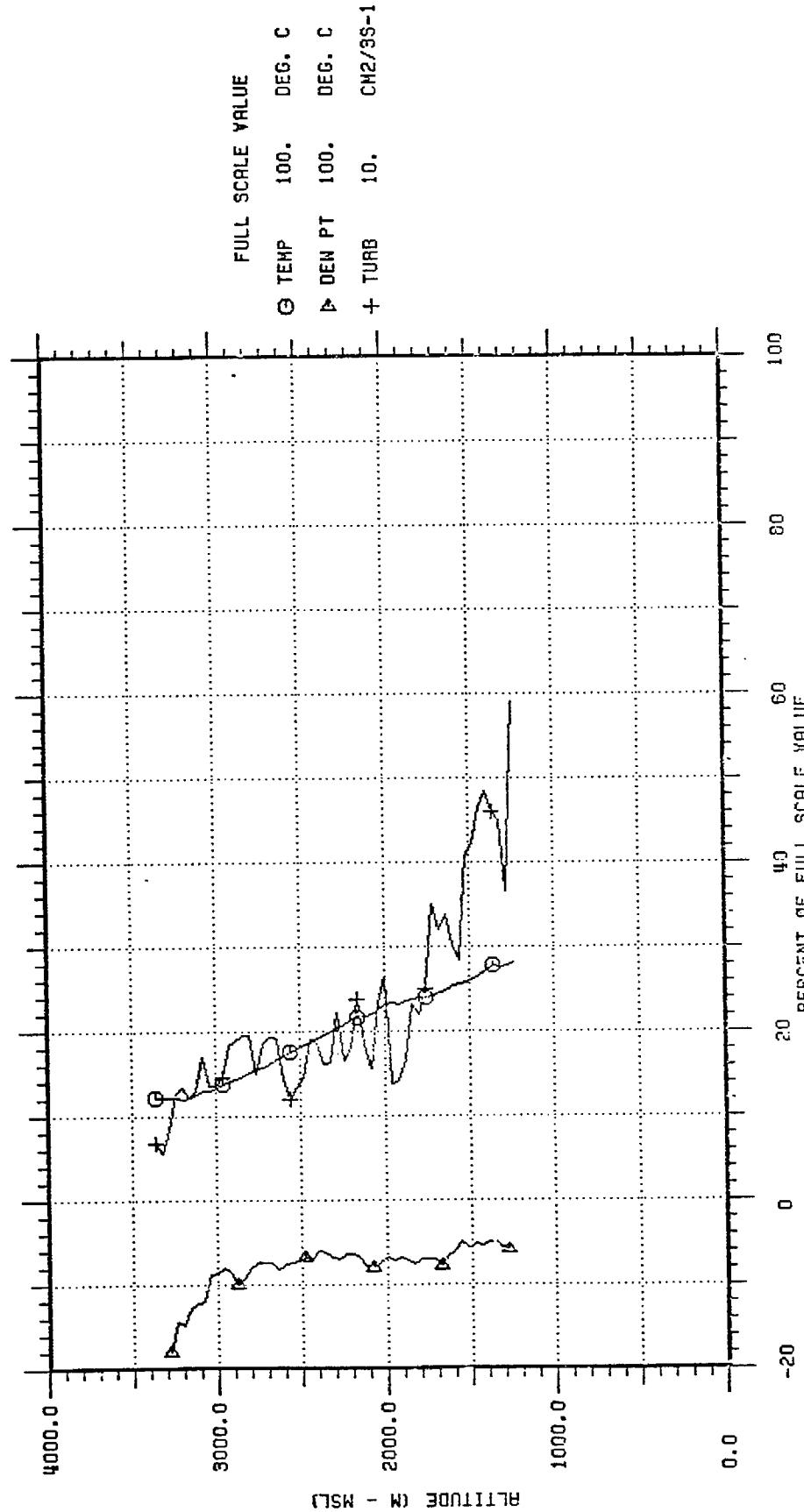
TAPE/PASS: 254/5 DATE: 7/18/81
TIME: 1652 TO 1705 (PDT)



811001.1
06:06:06

SED TRANSPORT
SPIRAL AT POINT 6

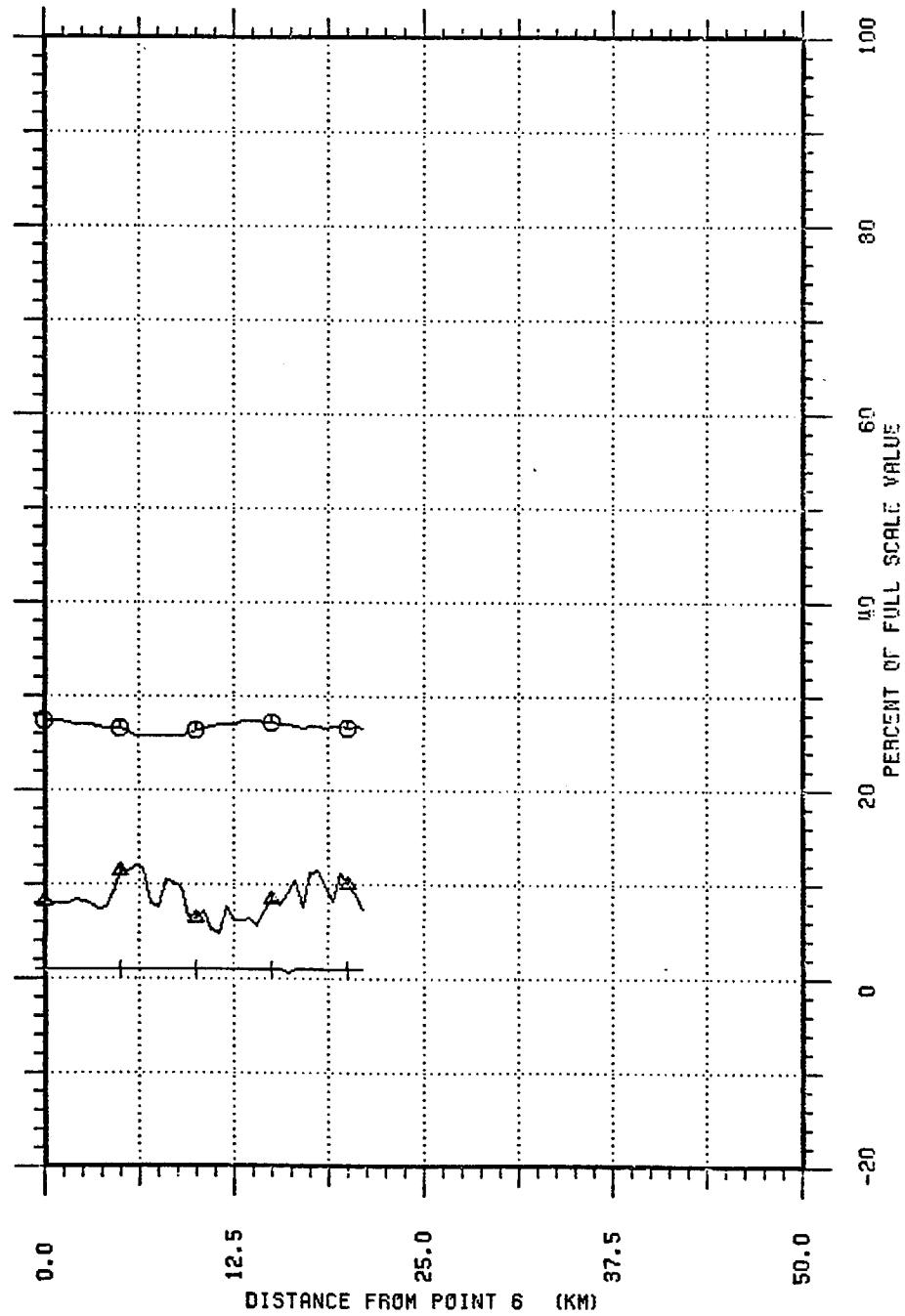
TAPE/PASS: 254/5 DATE: 7/18/81
TIME: 1652 TO 1705 (PDT)



811001.1
06:18:06

SED TRANSPORT
TRaverse from POINT 6 TO POINT 5 (1372 M MSL)

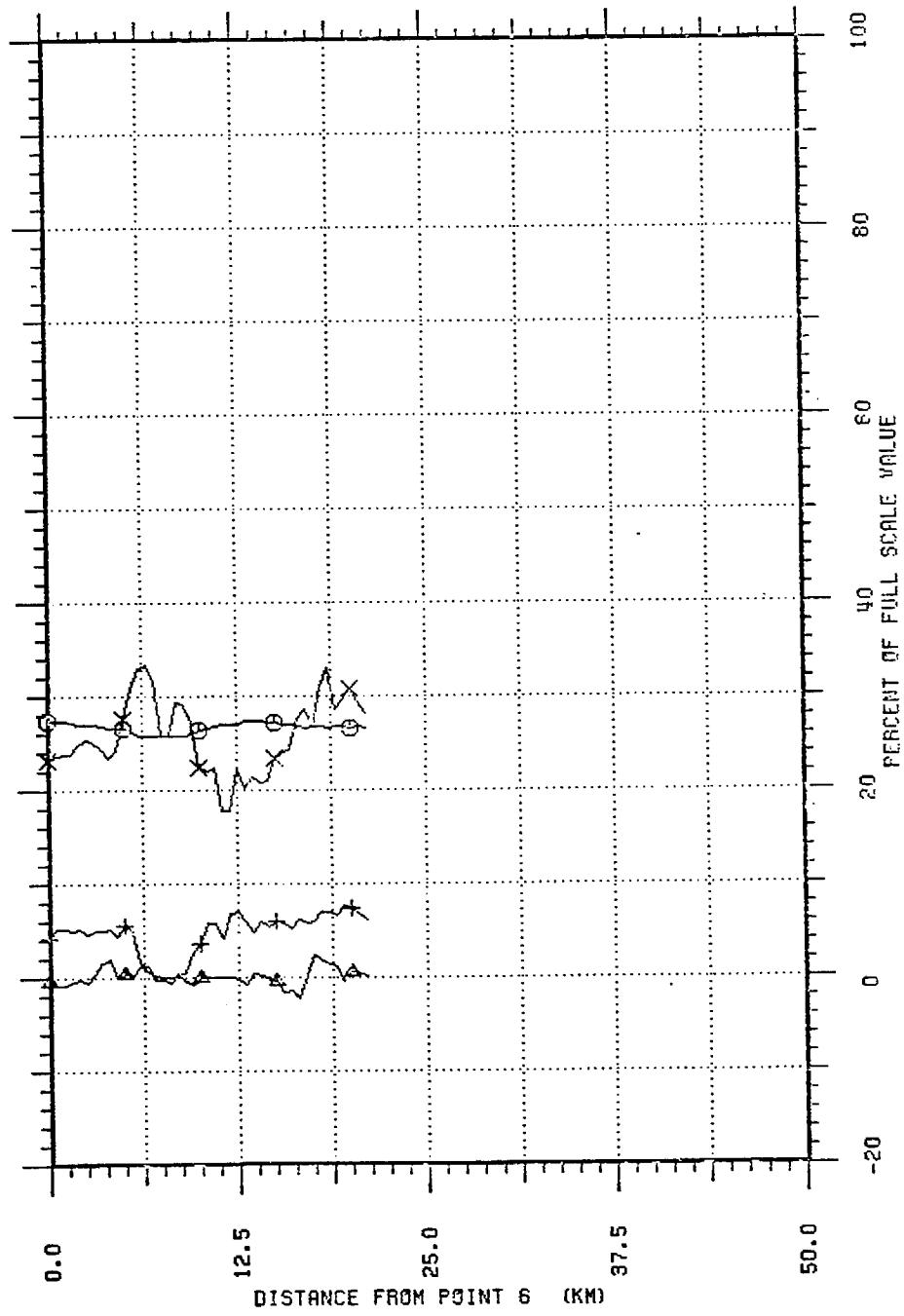
TAPE/PASS: 254/6 DATE: 7/18/81
TIME: 1707 TO 1713 (PDT)



SED TRANSPORT

TRAVERSE FROM POINT 6 TO POINT 5 (1372 M MSL)

TAPE/PASS: 254/6 DATE: 7/18/81
TIME: 1707 TO 1713 (PDT)

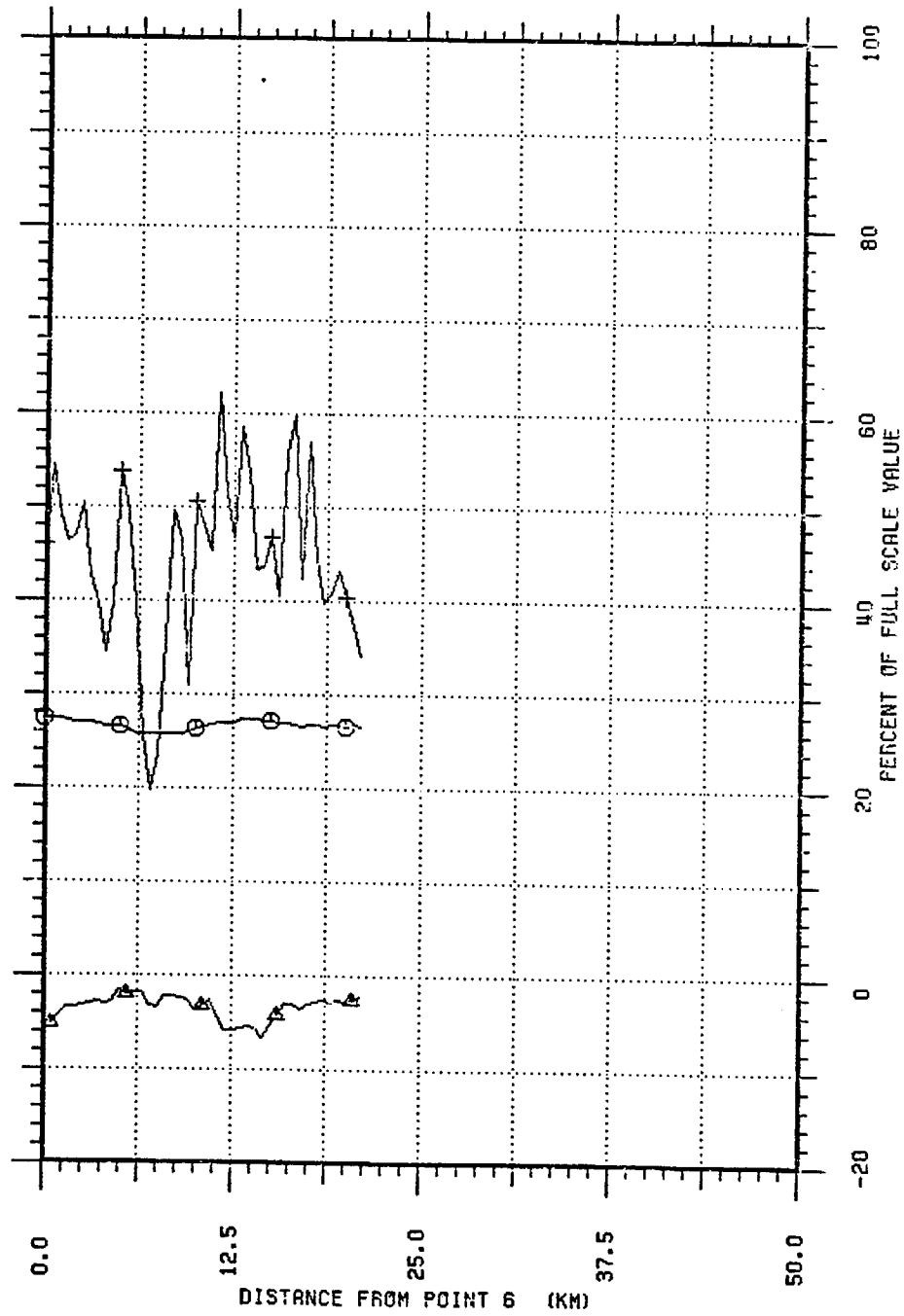


611001.1
96:08:06

SED TRANSPORT

TRAVERSE FROM POINT 6 TO POINT 5 (1372 M MSL)

TAPE/PASS: 254/6 DATE: 7 /18/81
TIME: 1707 TO 1713 (PDT)

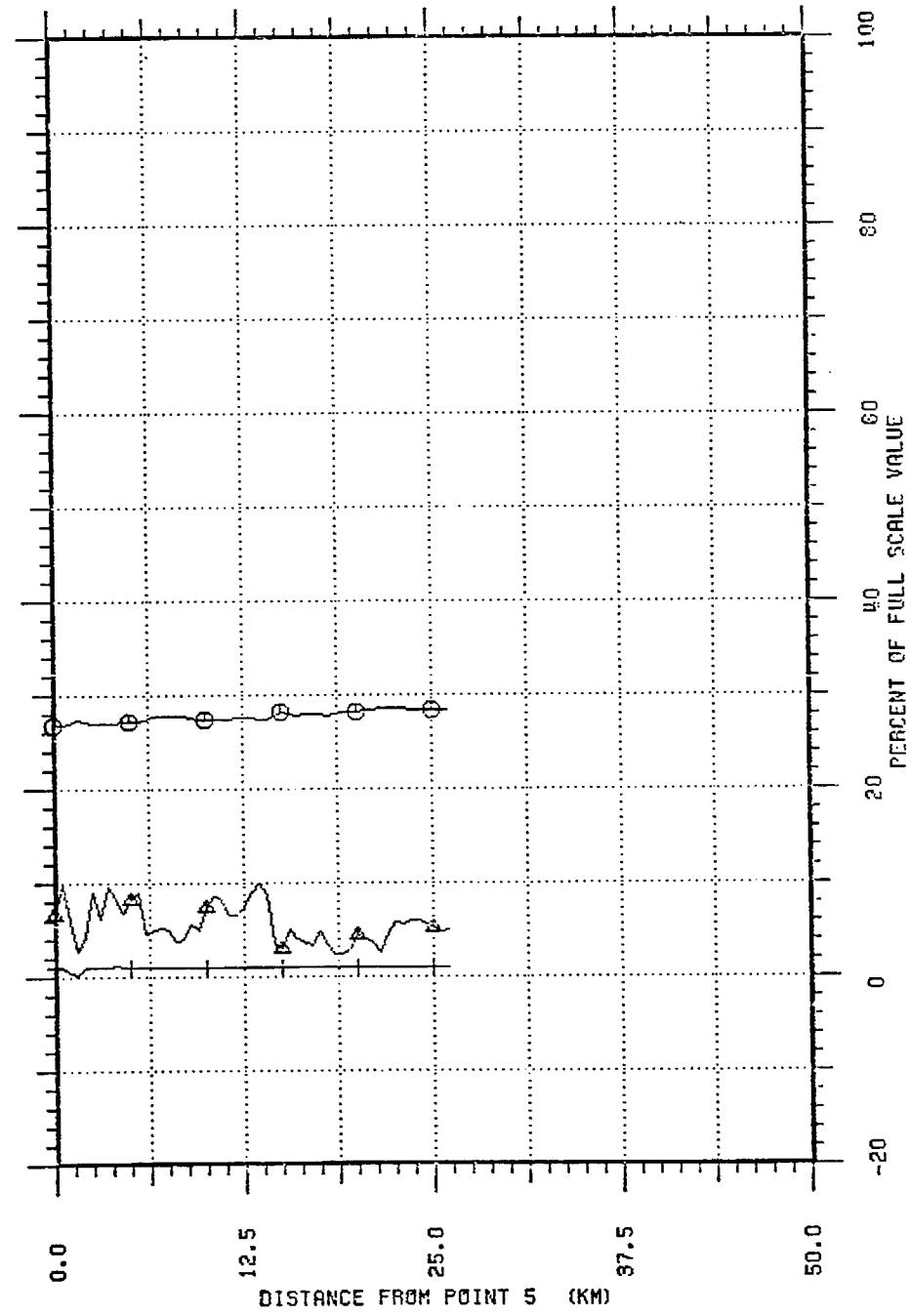


811000;1
GG;16;05

SED TRANSPORT

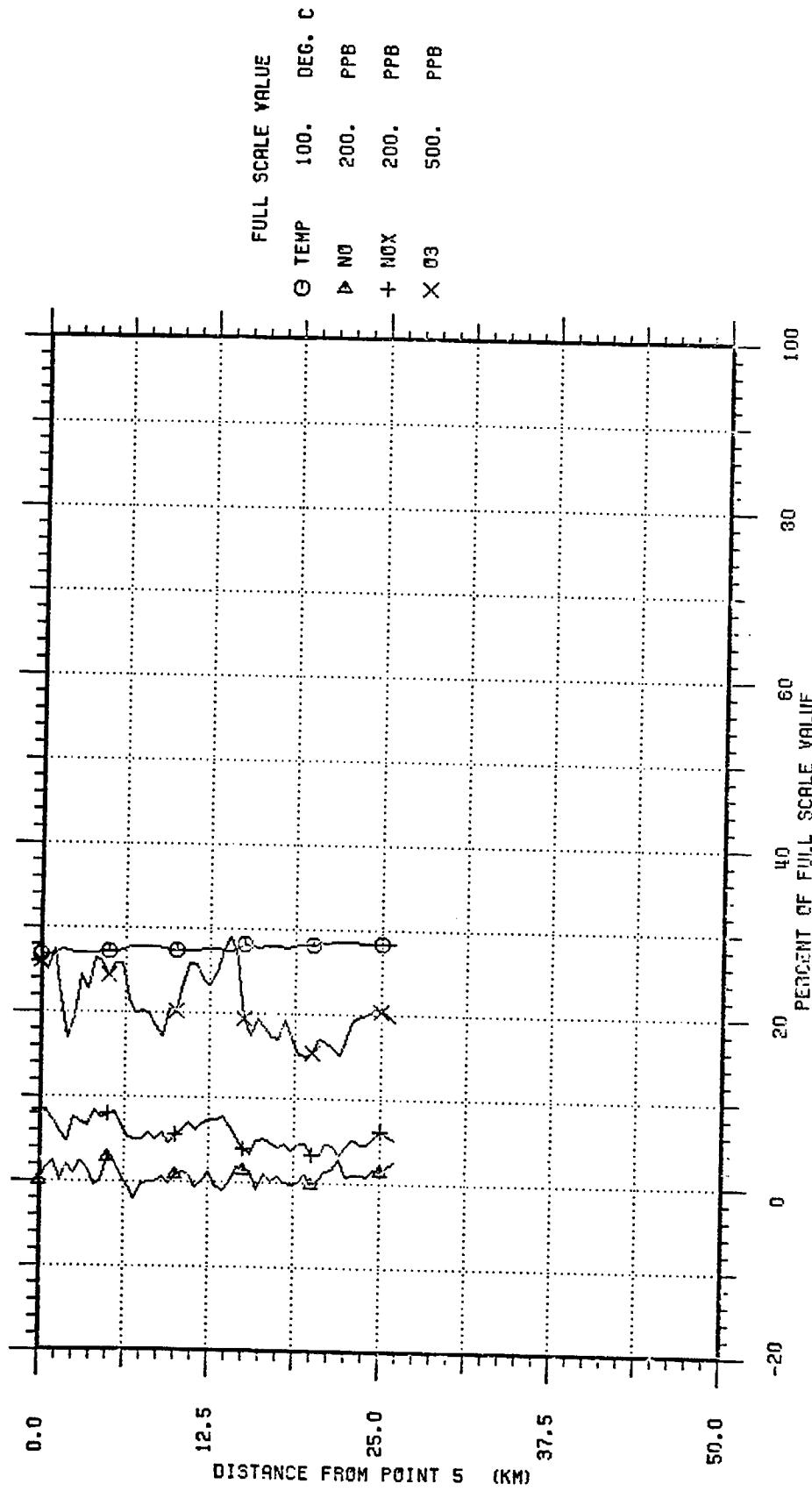
TRAVESE FROM POINT 5 TO POINT 7 (11372 M MSL)

TAPE/PASS: 254/7 DATE: 7 /18/81
TIME: 1718 TO 1724 (PDT)

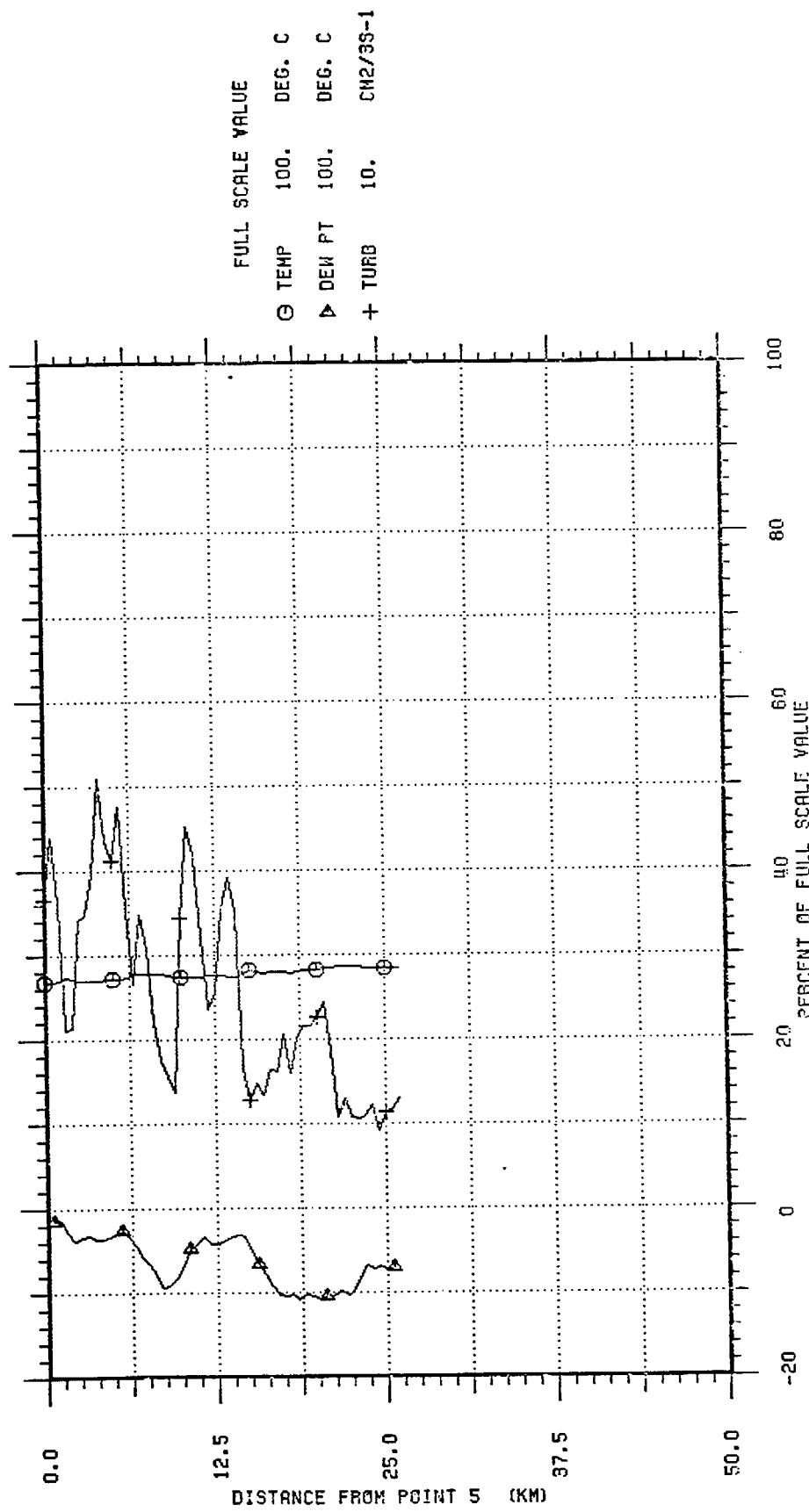


811001.1
06:48:06

SED TRANSPORT
TRAVERSE FROM POINT 5 TO POINT 7 (1372 M MSL) TAPE/PASS: 254/7 DATE: 7 /18/81
TIME: 1718 TO 1724 (PDT)

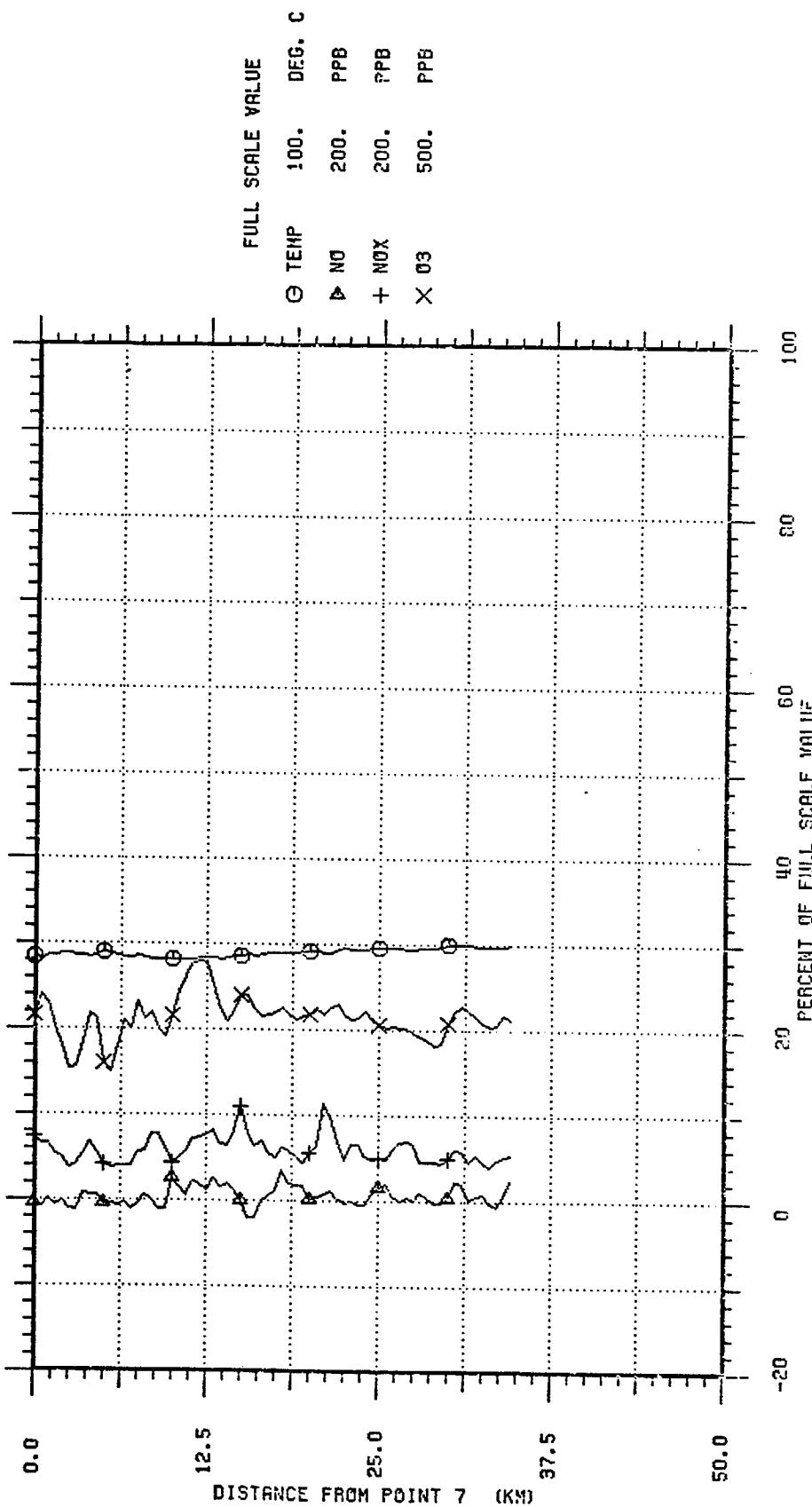
811001.1
06:48:06

SED TRANSPORT
 TRAVERSE FROM POINT 5 TO POINT 7 (1372 M MSL) TAPE/PASS: 254/7 DATE: 7/18/81
 TIME: 1718 TO 1724 (PDT)



611001.1
 06:18:06

SED TRANSPORT
TRaverse from Point 7 to Point 8 (1372 m MSL) TIME: 1725 TO 1733 (PDT)
TAPE/PASS: 254/8 DATE: 7/18/81

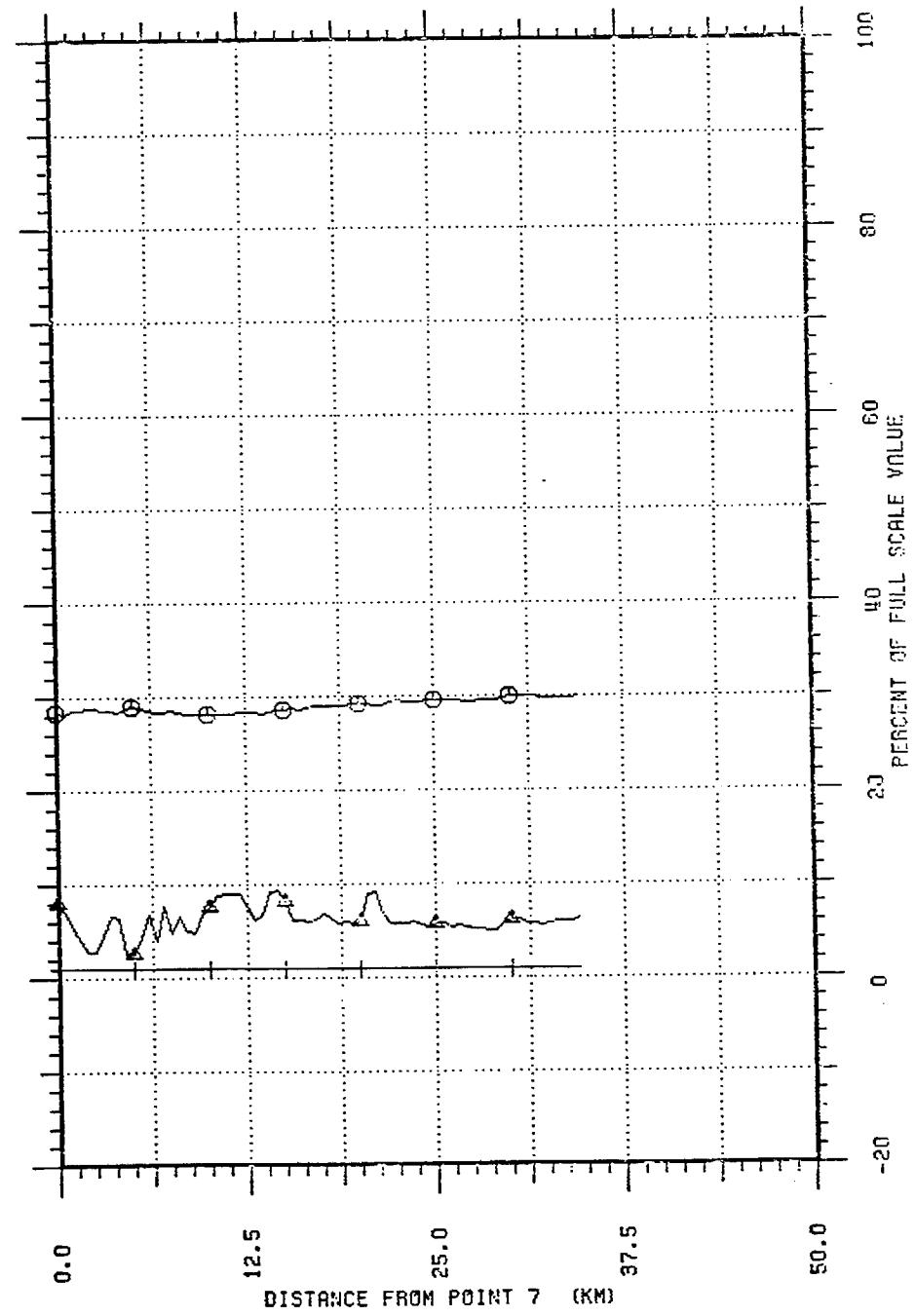


311001.1
0C:48:06

SED TRANSPORT

TRaverse from Point 7 to Point 8 (11372 M HSL)

TAPE/PASS: 254/8 DATE: 7 /18/81
TIME: 1725 TO 1733 (PDT)

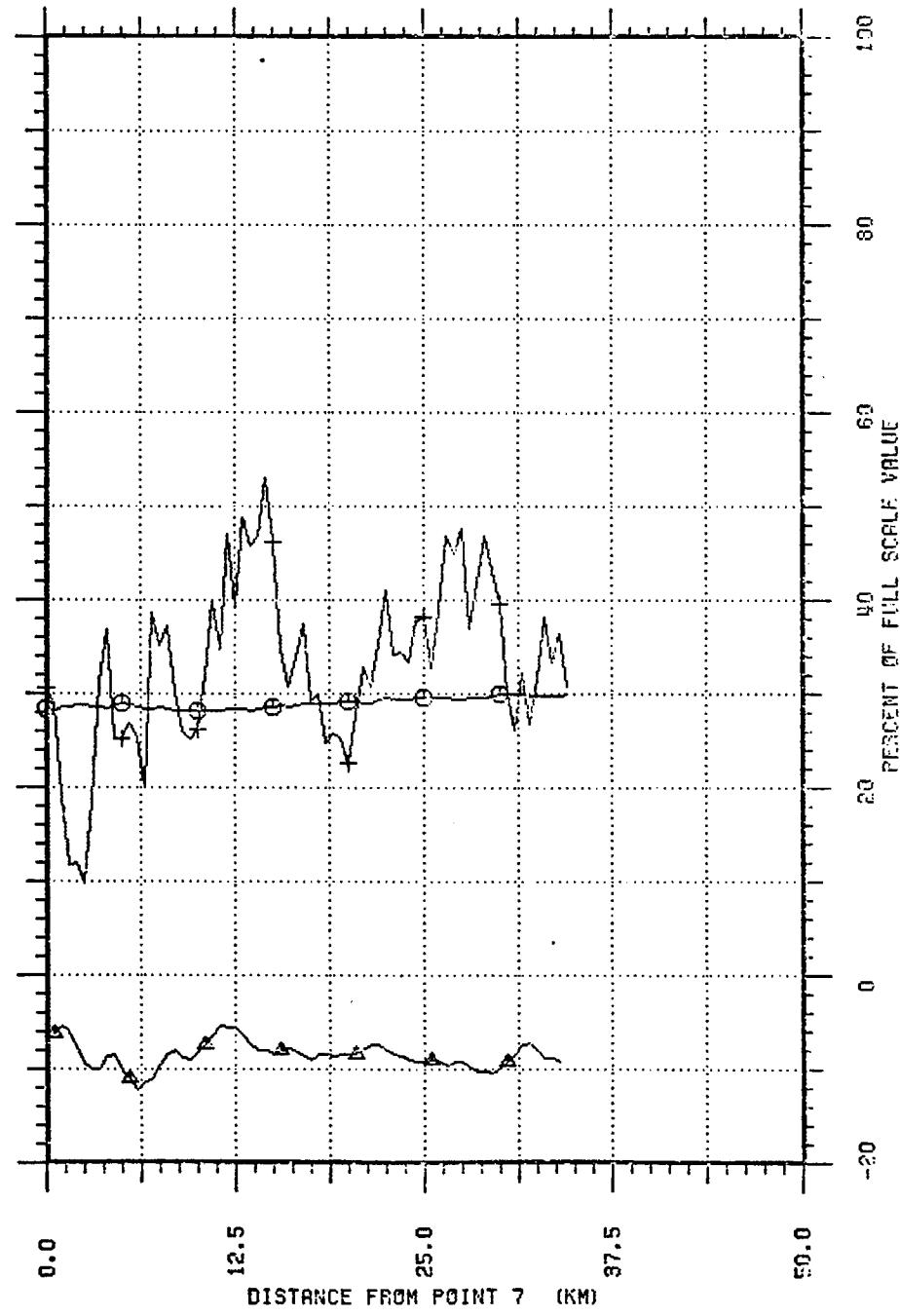


811001.1
06:13:56

SED TRANSPORT

TRaverse from Point 7 to Point 8 (11372 M MSL)

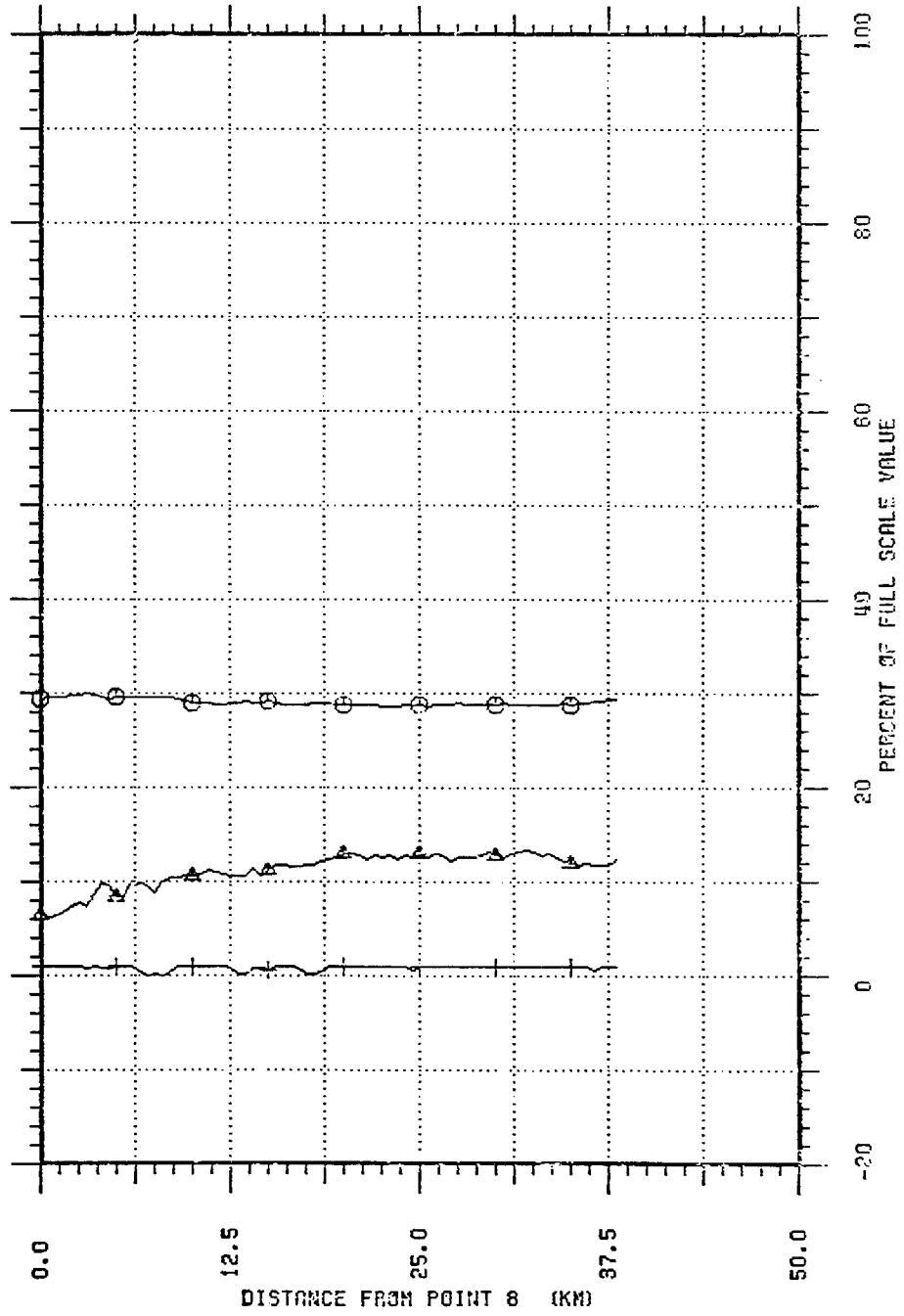
TAKE/PASS: 254/8 DATE: 7/18/81
TIME: 1725 TO 1733 (PDT)



811001:1
06-05-81

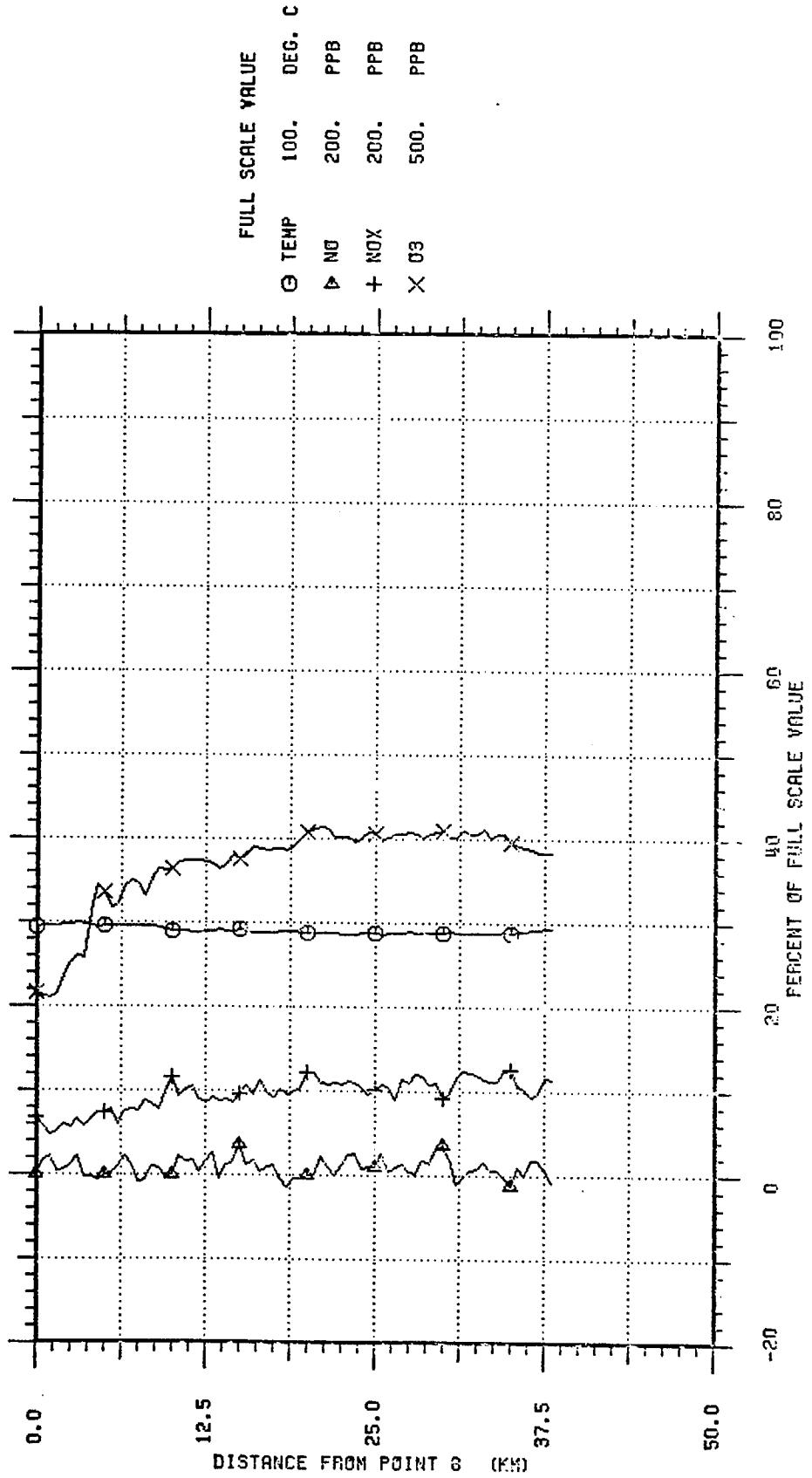
SEN. TRANSPORT
TRaverse from Point 8 to Point 9 (11372 M MSL)

TAPE/PASS: 254/9 DATE: 7 /18/81
TIME: 1737 TO 1748 (PDT)



E11001.1
06:48:03

SED TRANSPORT
TRAVERSE FROM POINT 8 TO POINT 9 (1372 M MSL) TIME: 1737 TO 1748 (PDT)
TAPE/PASS: 254/9 DATE: 7/18/81

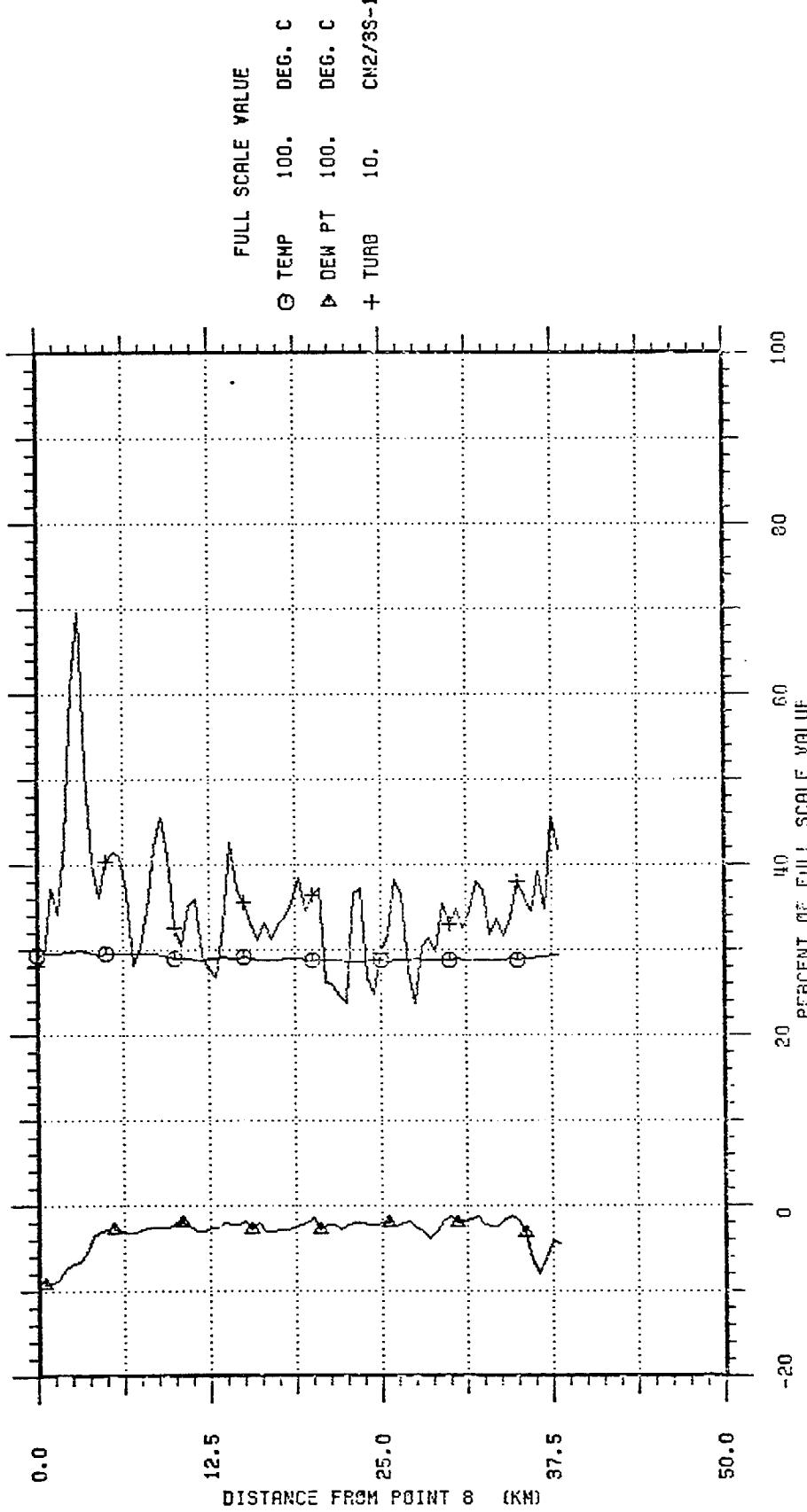
811001.1
06:46:06

SED TRANSPORT

TRaverse FROM POINT 8 TO POINT 9 (1372 M MSL)

TAPE/PASS: 254/9 DATE: 7 /18/81

TIME: 1737 TO 1748 (PDT)



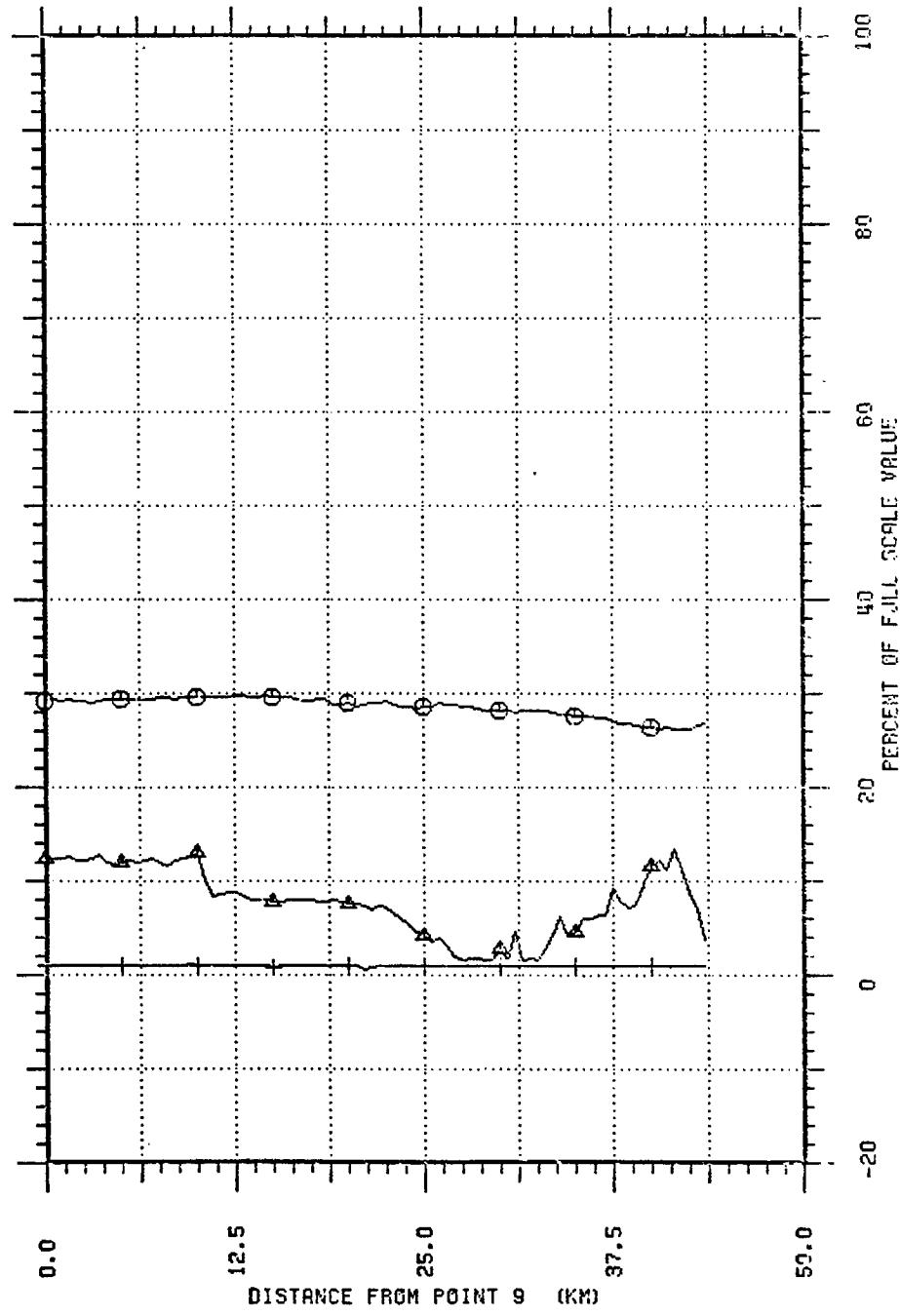
811001.1
35.9

SED TRANSPORT

TRAVERSE FROM POINT 9 TO POINT 5 (1372 M MSL)

TAPE/PASS: 254/10 DATE: 7/18/81

TIME: 1750 TO 1803 (PDT)

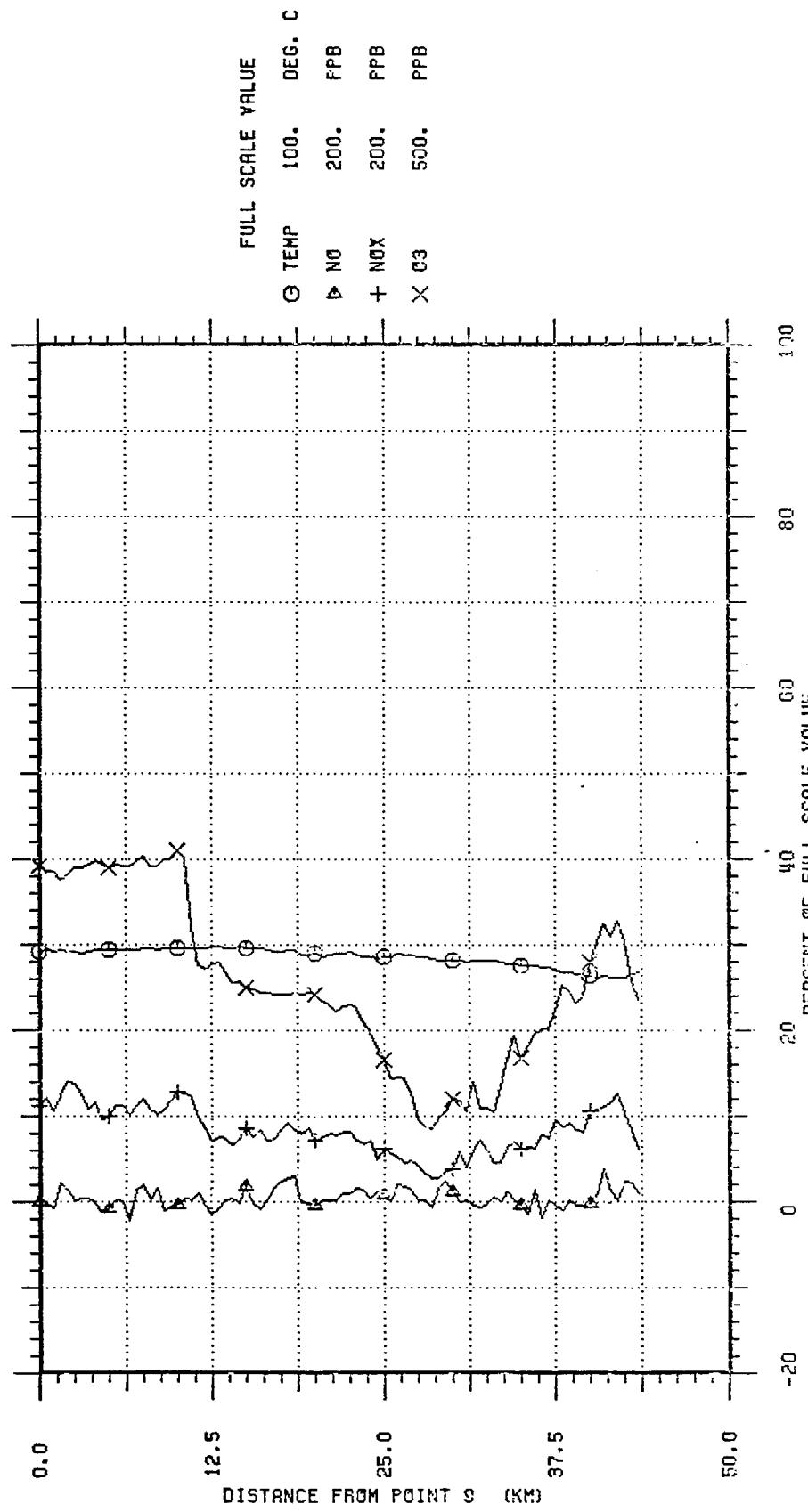


SED TRANSPORT

TRaverse from POINT 9 TO POINT 5 (11372 M MSL)

TAPE/PASS: 254/10 DATE: 7 /18/81

TIME: 1750 TO 1803 (PDT)



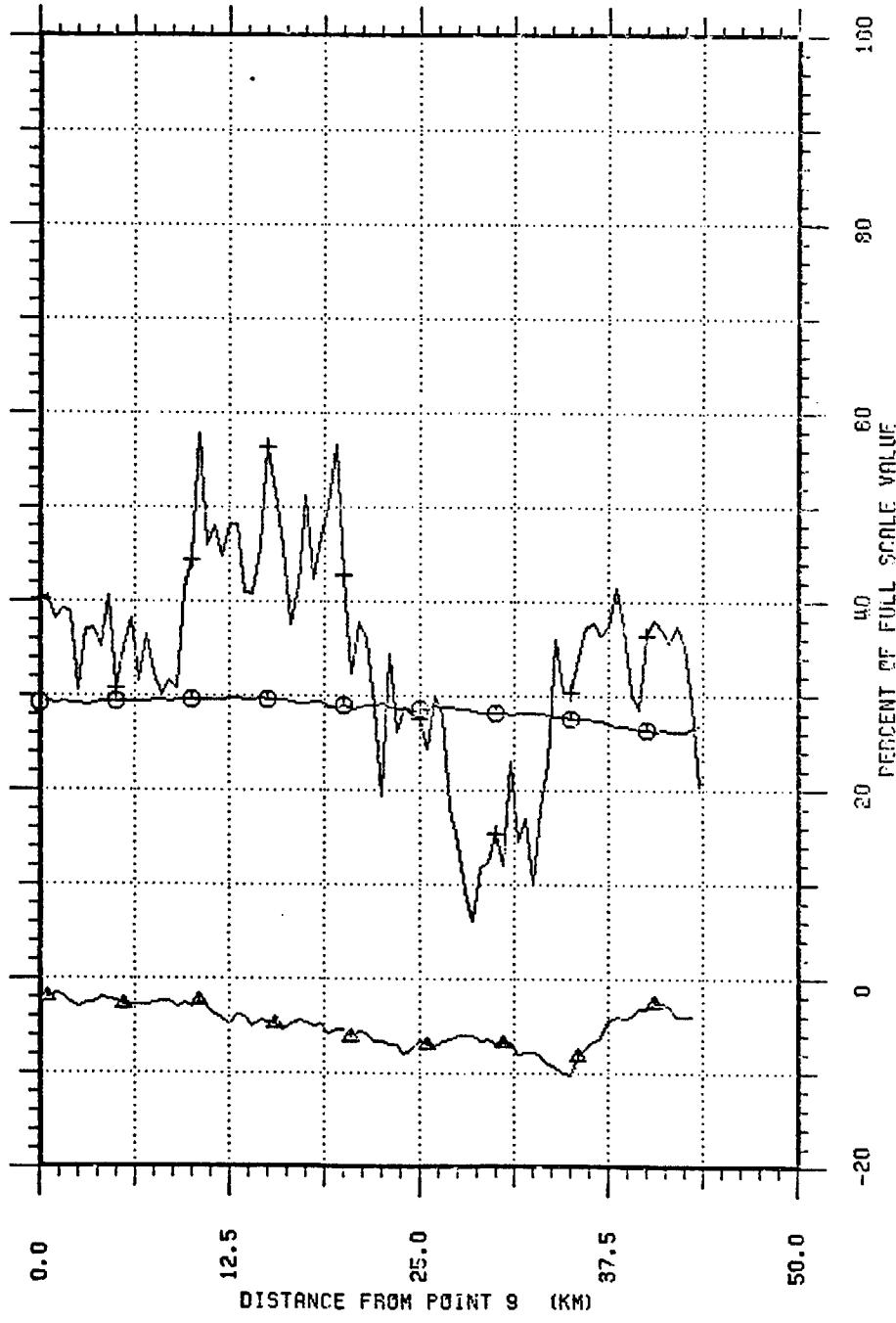
811001
26.46.96

SED TRANSPORT

TRAVERSE FROM POINT 9 TO POINT 5 (11372 M MSL)

TAPE/PASS: 254/10 DATE: ? /18/81

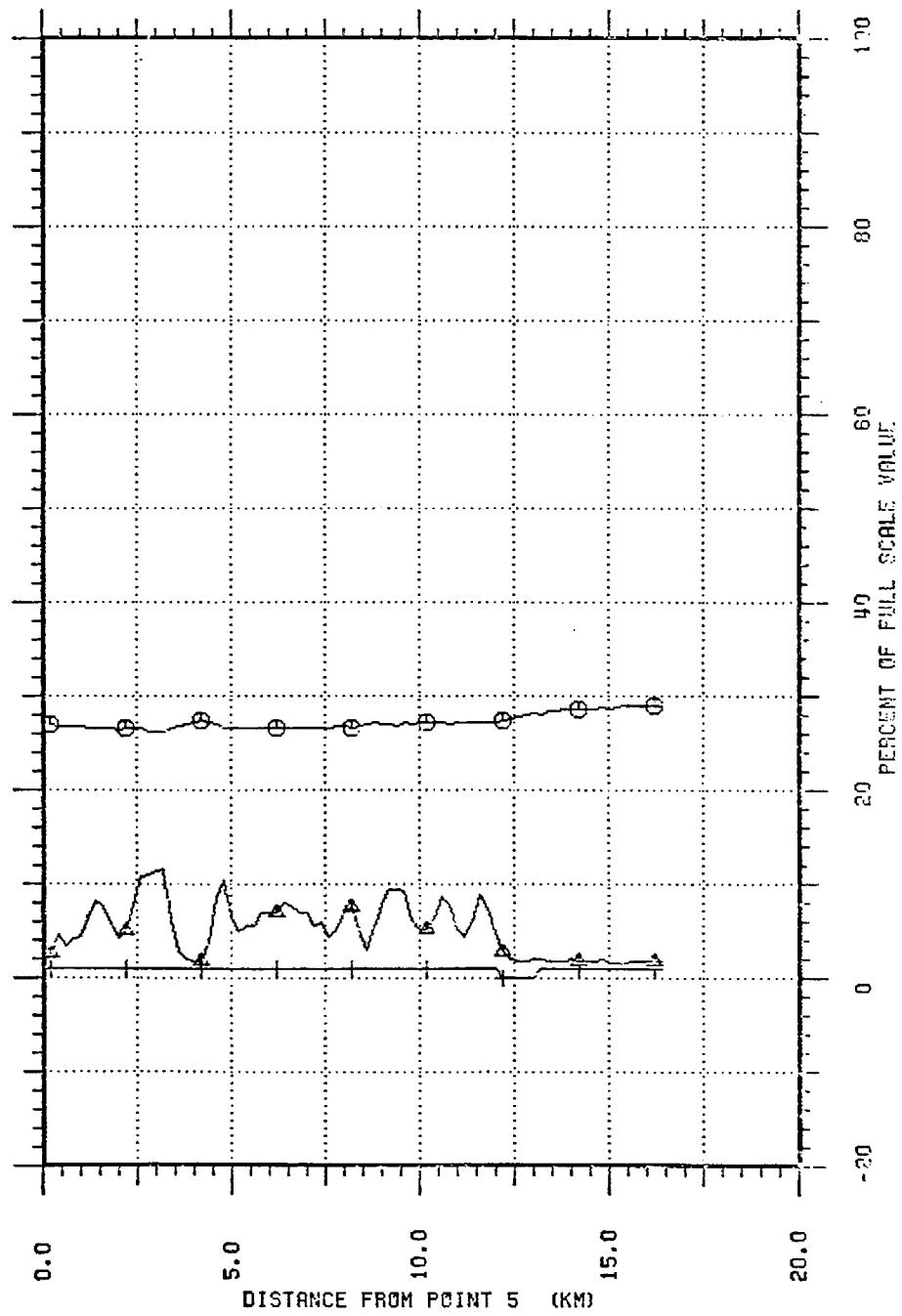
TIME: 1750 TO 1603 (PDT)



SED TRANSPORT

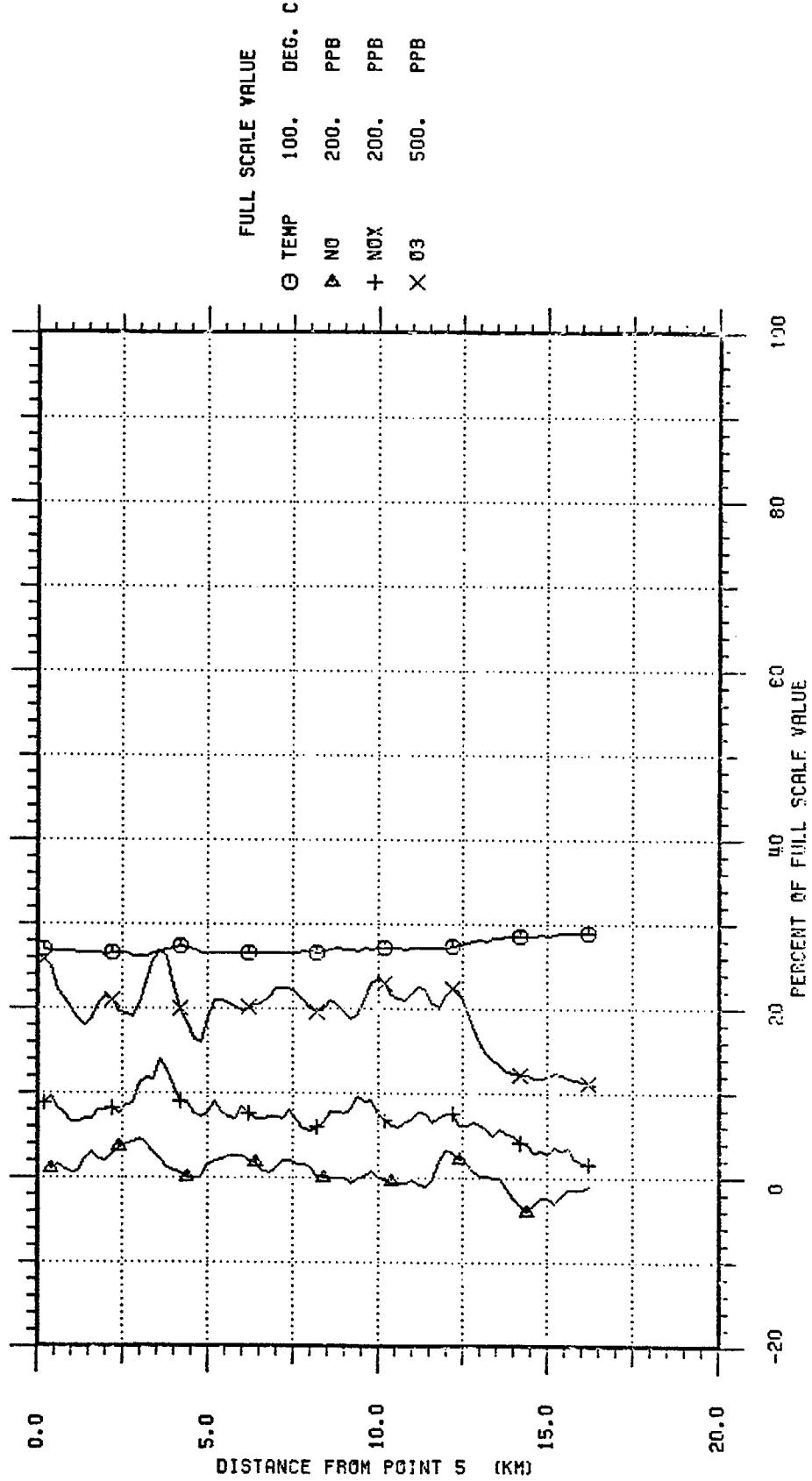
TRAVERSE FROM POINT 5 TO POINT 10 (1972 M MSL) TIME: 1805 TO 1808 (PDT)

TAPE/PASS: 254/11 DATE: 7/18/81



6110001
26:48:03

SED TRANSPORT
TRaverse from POINT 5 TO POINT 10 (11372 M MSL)
TAPE/PASS: 254/11 DATE: 7/18/81
TIME: 1805 TC 1808 (PDT)

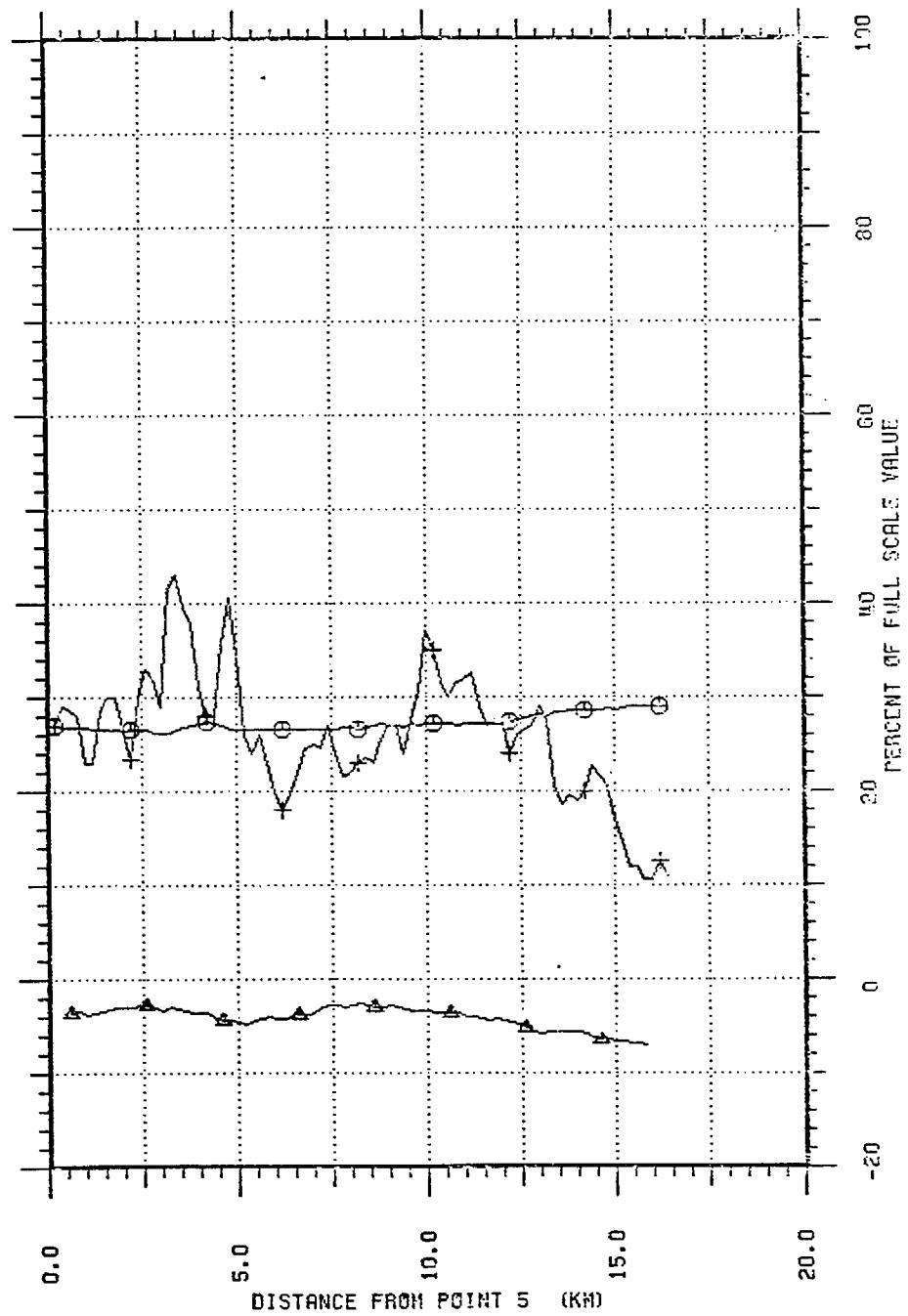


311001.1
06:48:06

SED TRANSPORT

TRaverse from POINT 5 TO POINT 10 (1372 M MSL)

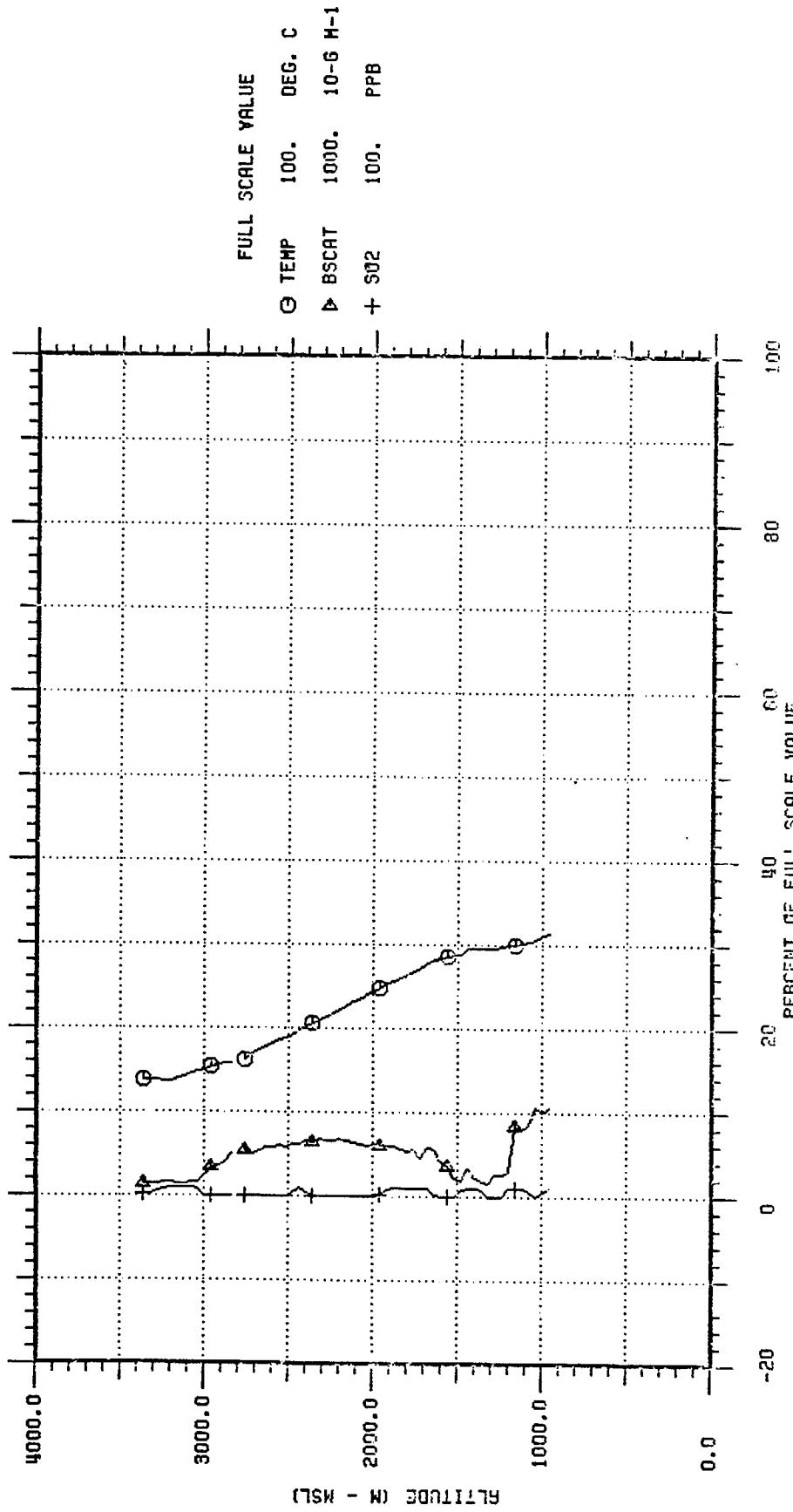
TAPE/PASS: 254/11 DATE: 7 /18/81
TIME: 1805 TO 1808 (PDT)



0110001.1
06:06:26

SED TRANSPORT
SPIRAL AT POINT 10

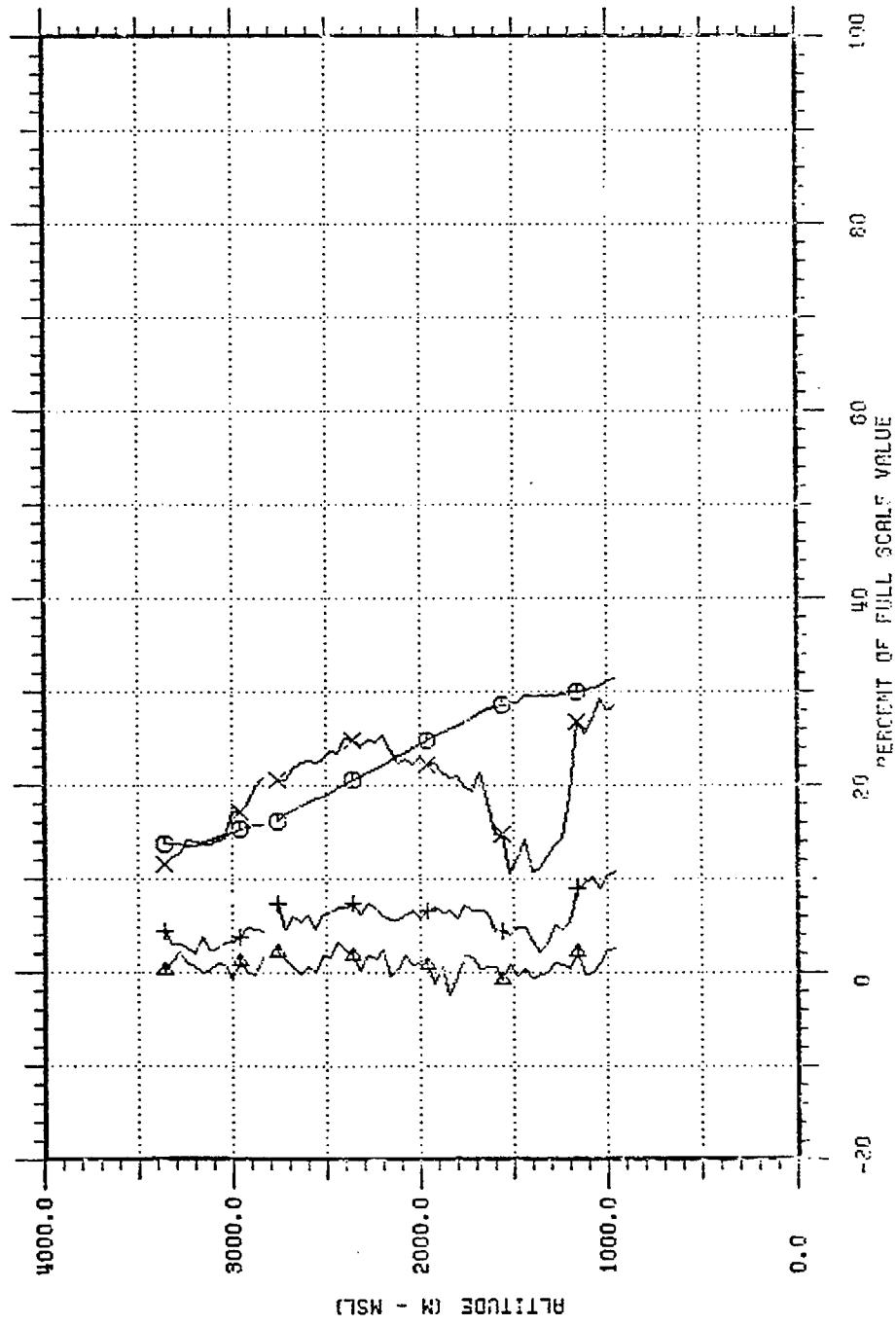
TAPE/PASS: 254/12 DATE: 7/18/81
TIME: 1810 TO 1833 (PDT)



341001.1
00100.66

SED TRANSPORT
SPIRAL AT POINT 10

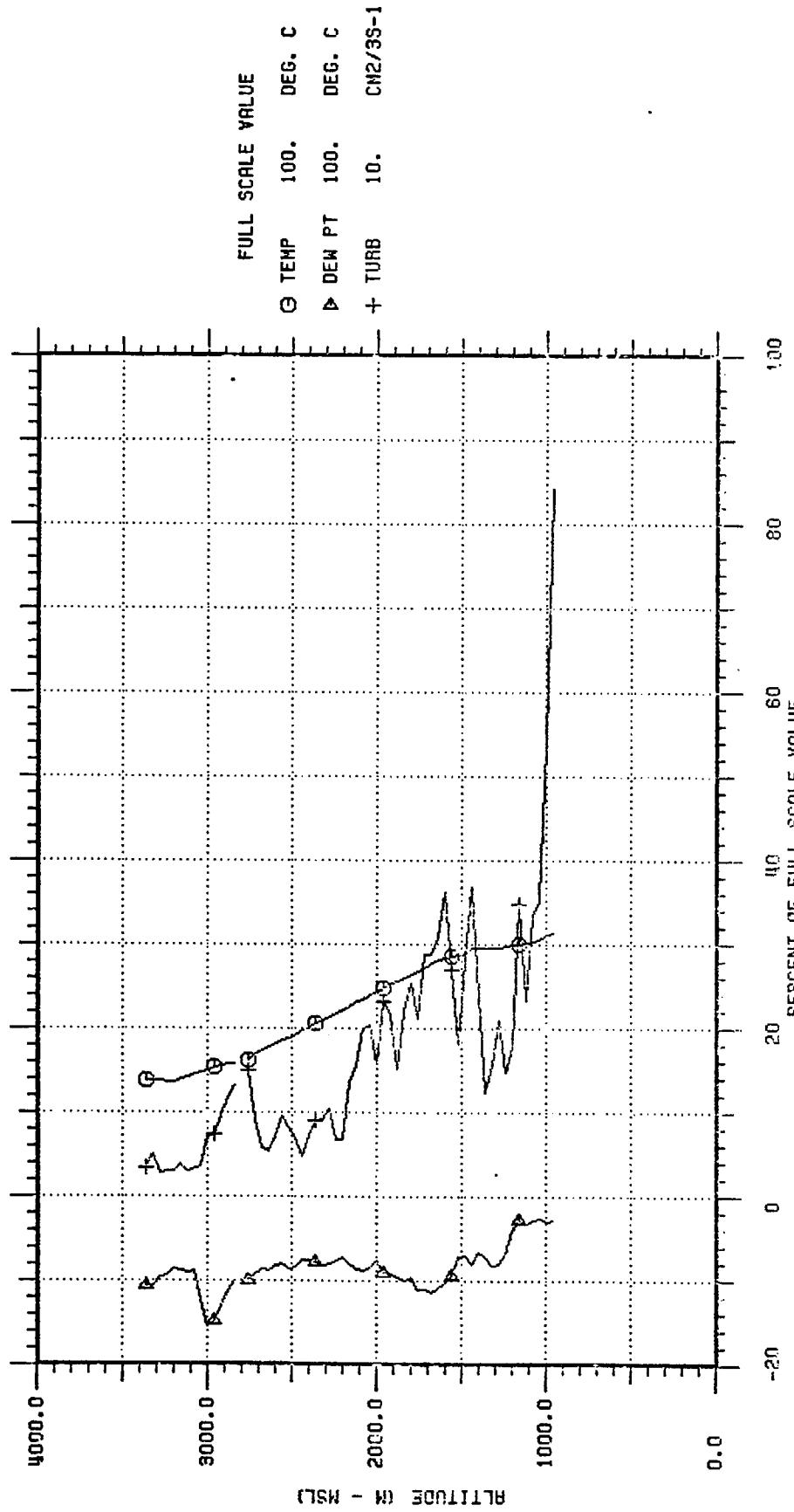
TAPE/PASS: 254/12 DATE: 7 /18/81
TIME: 1810 TO 1833 (PDT)



211001.1
26:13:06

SED TRANSPORT
SPHERAL AT POINT 10

TAPE/PASS: 254/12 DATE: 7 /18/81
TIME: 1810 TO 1833 (FUT)



8:1001,1
06:46:35

Date: July 19, 1981

MRI FLIGHT SUMMARY

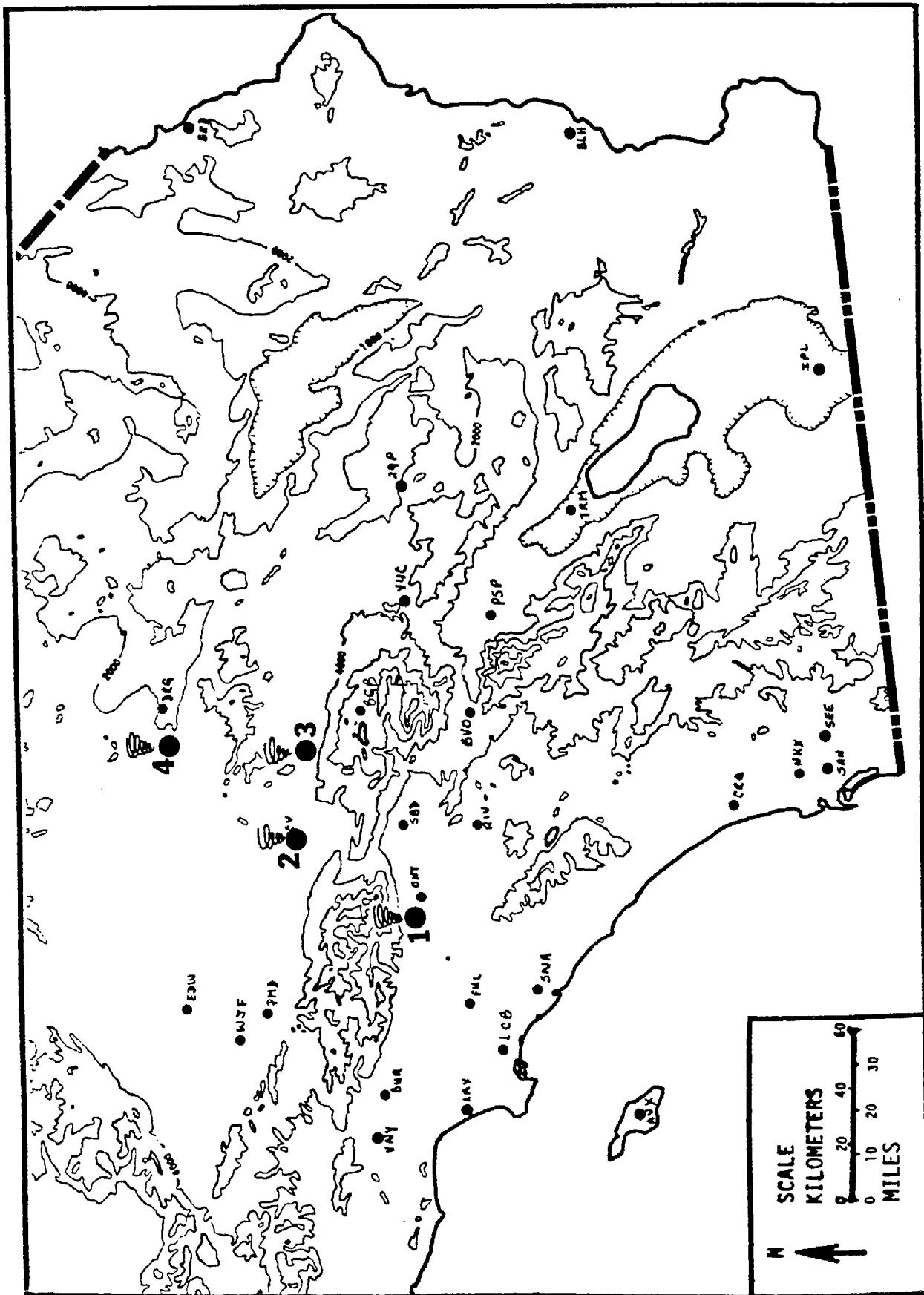
SOUTHEAST DESERT OZONE TRANSPORT STUDY

Tape #: 255

Pass No.	Sampling Start (PDT)	Sampling Times	Flight Type	End Points	Sampling MSL m	Altitude Start	Traverse Length or Orbit Time	Tracer Samples	Comments
1	657	715	Spiral	1	442-2438	No A•	E1-14	Sfc	Elev = 442 m
2	732	748	Spiral	2	3048- 922	No A•	E15-29	Sfc	Elev = 915 m
3	759	814	Spiral	3	853-2591	No A•	E30-41	Sfc	Elev = 849 m
4	827	844	Spiral	4	3048- 640	No A•	E42-57	Sfc	Elev = 634 m
5	910	925	Zero Spiral		2438- 442	No A•	0		Instrument calibration

19 July 1981 Tape #255
TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°06.0'	117°37.3'	Cable Airport
2	34°31.2'	117°18.8'	Victorville Drive-In
3	34°28.3'	117°01.0'	Rabbit Dry Lake Lucern Valley
4	34°54.3'	117°03.0'	Barstow



SOUTHEAST DESERT OZONE TRANSPORT STUDY

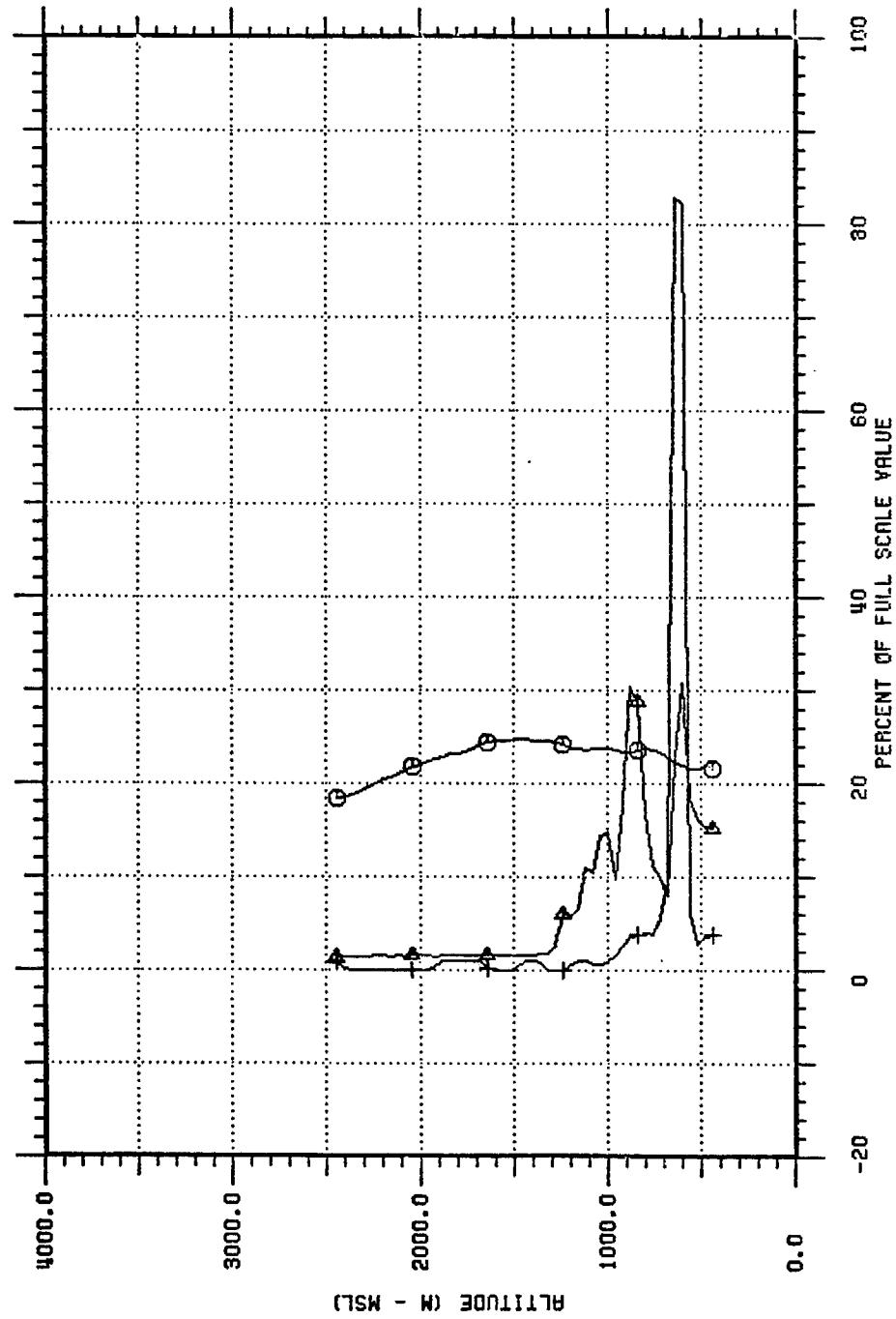
MRI SAMPLING FLIGHT

July 19, 1981

Tape #255

SED TRANSPORT
SPIRAL AT POINT 1

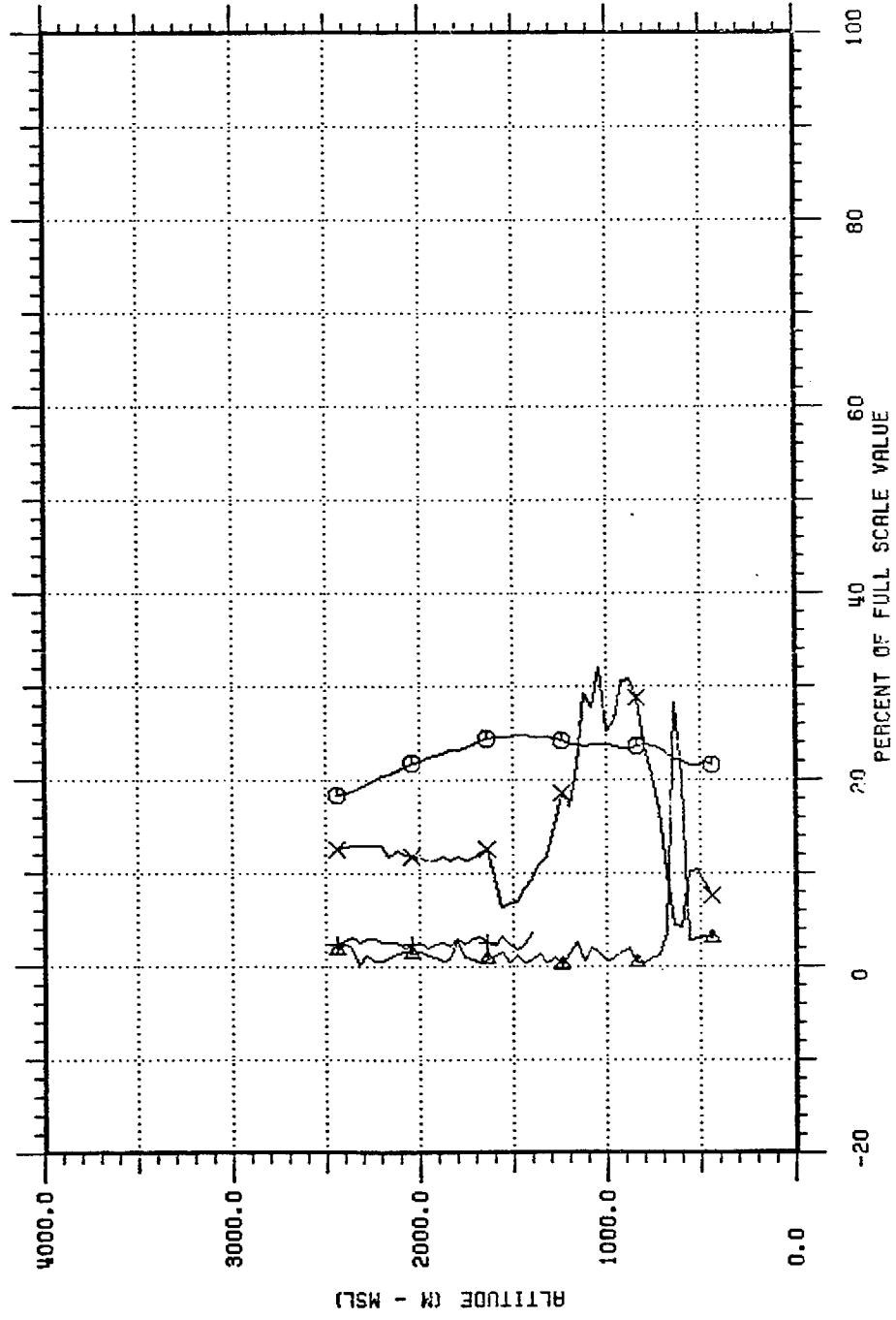
TAPE/PASS: 255/1 DATE: 7/19/81
TIME: 657 TO 715 (PDT)



800925.1
11:05:43

SED TRANSPORT
SPOTFL AT POINT 1

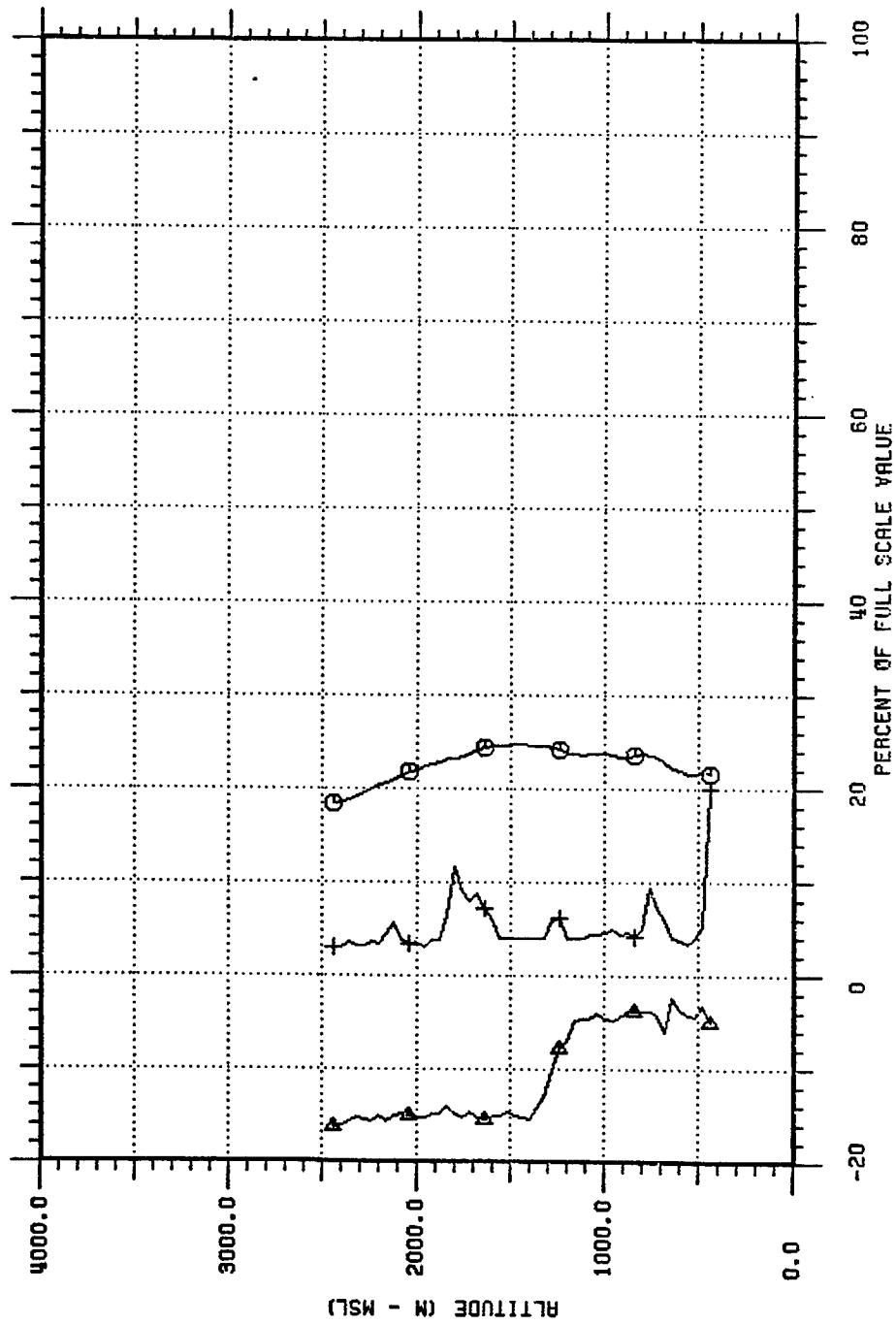
TAPE/PASS: 255/1 DATE: 7 /19/81
TIME: 657 TO 715 (PDT)



800925.1
14:05:43

SED TRANSPORT
SPIRAL AT POINT 1

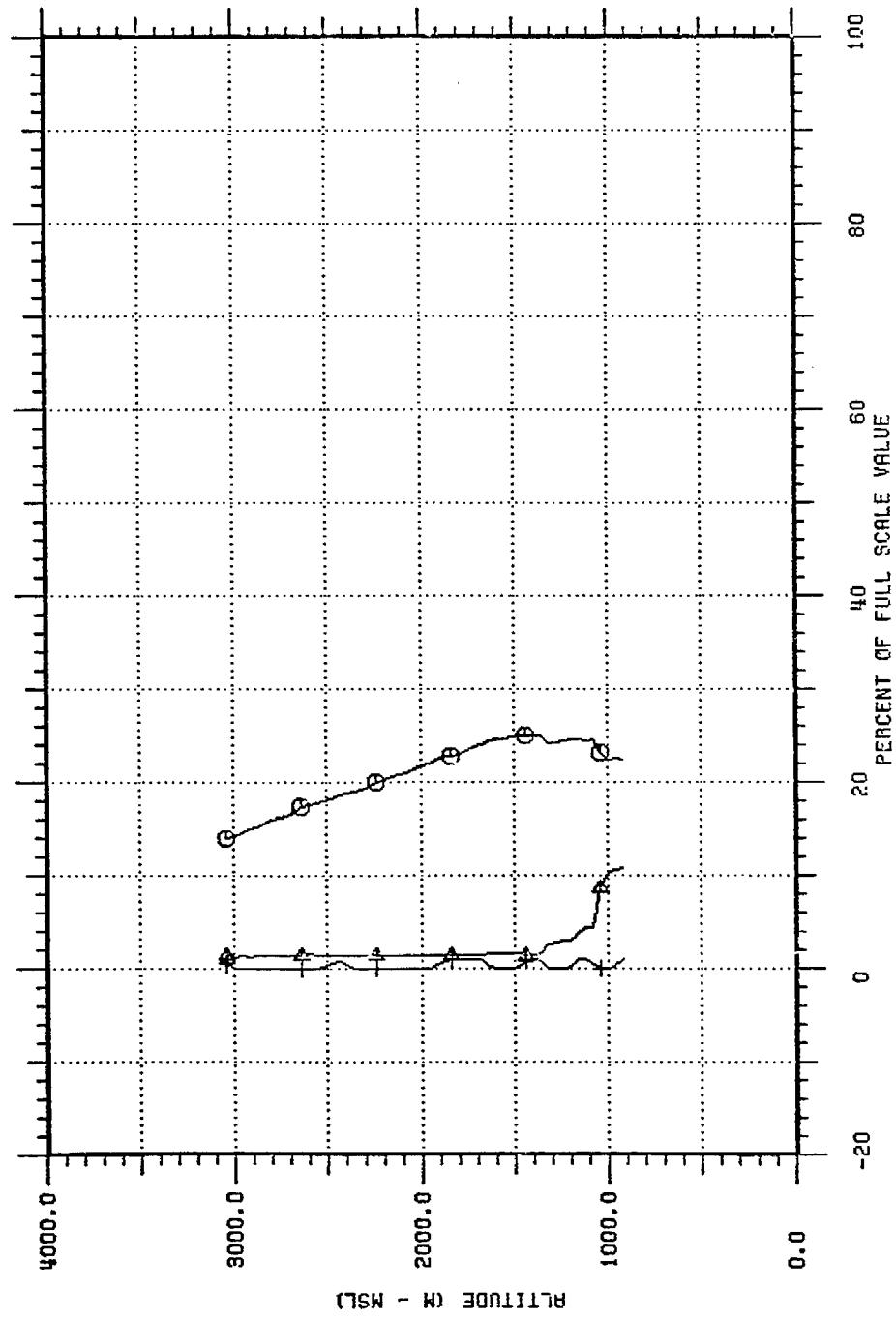
TAPE/PASS: 255/1 DATE: 7 /19/81
TIME: 657 TO 715 (PDT)



800925.1
14:05:43

SED TRANSPORT
SPIRAL AT POINT 2

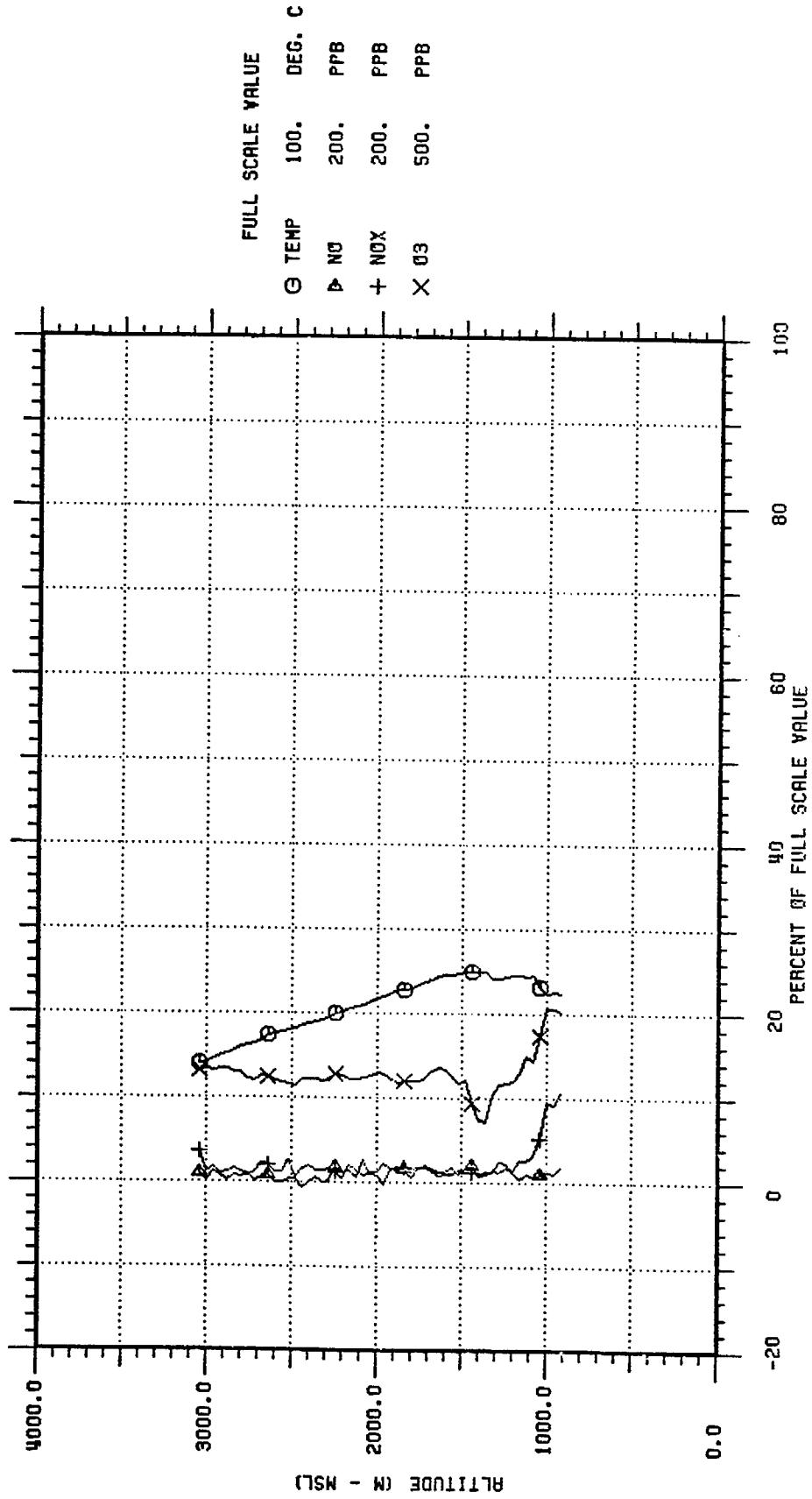
TAPE/PASS: 255/2 DATE: 7 /19/81
TIME: 732 TO 748 (PDT)



800925.1
14:05:43

SED TRANSPORT
SPIRAL AT POINT 2

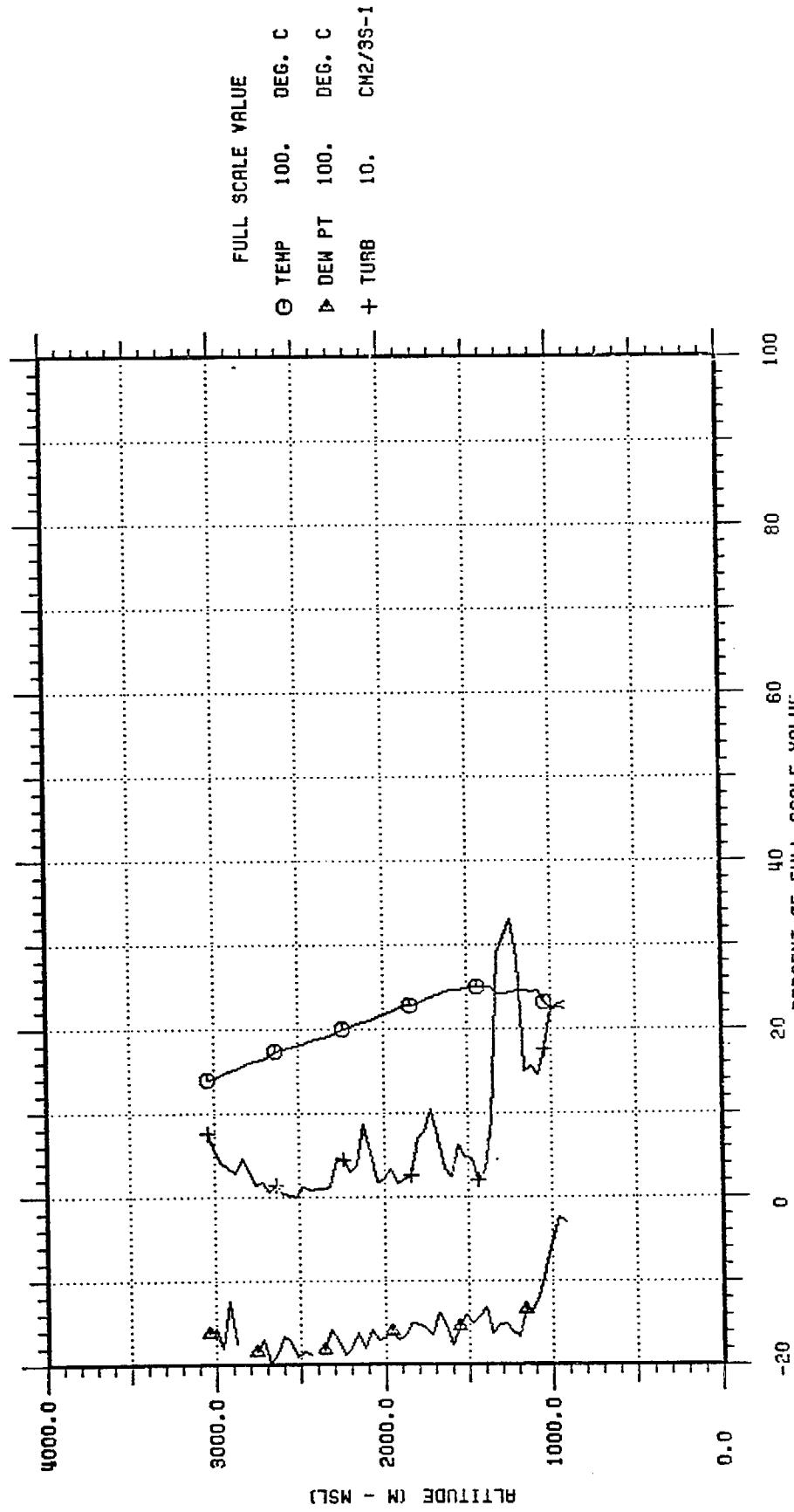
TAPE/PASS: 255/2 DATE: 7 /19/81
TIME: 732 TO 748 (PDT)



800925.1
14:05:43

SED TRANSPORT
SPIRAL AT POINT 2

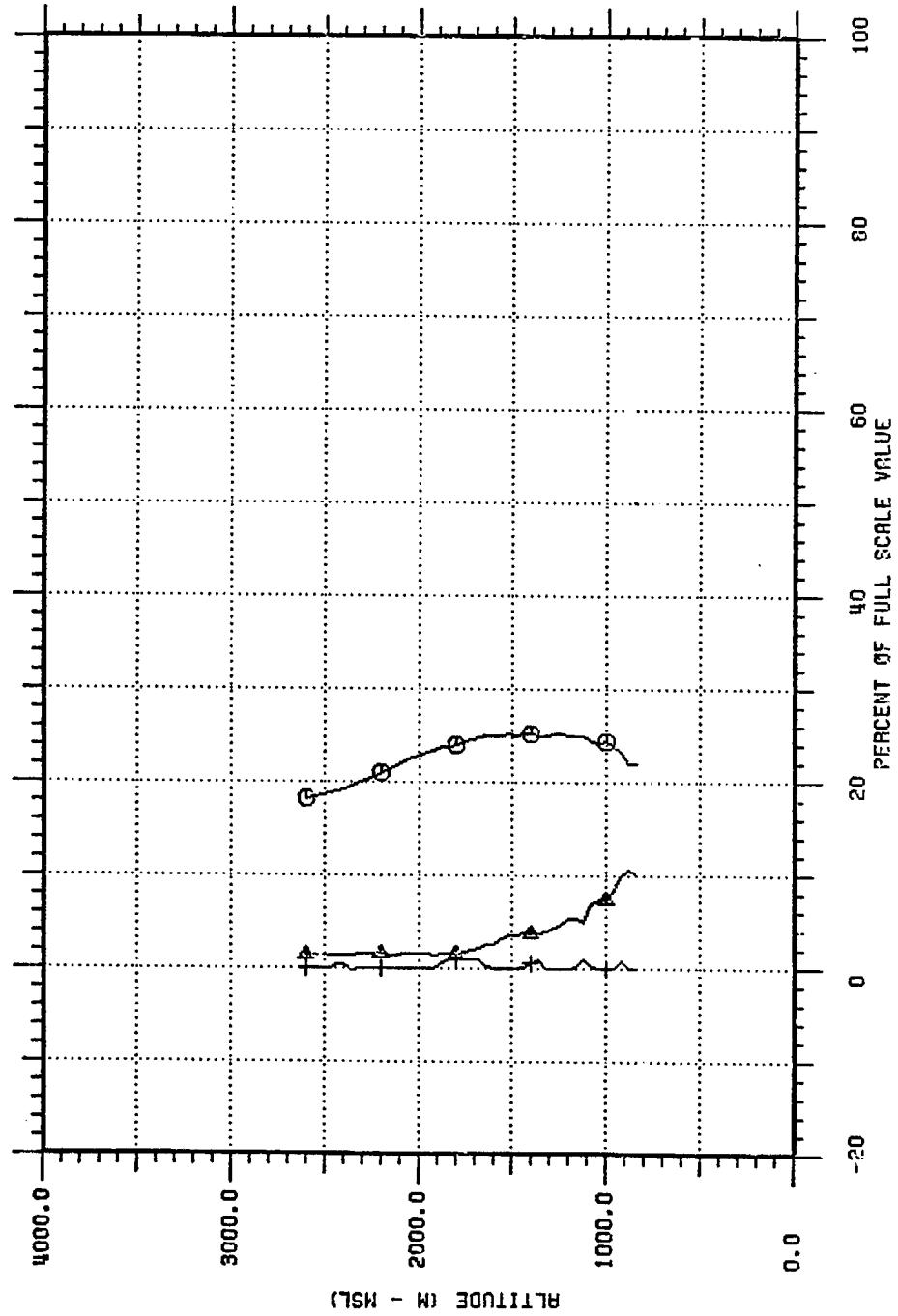
TAPE/PASS: 255/2 DATE: 7 /19/81
TIME: 732 TO 748 (PDT)



800925.1
14:05:43

SED TRANSPORT
SPECTRAL AT POINT 3

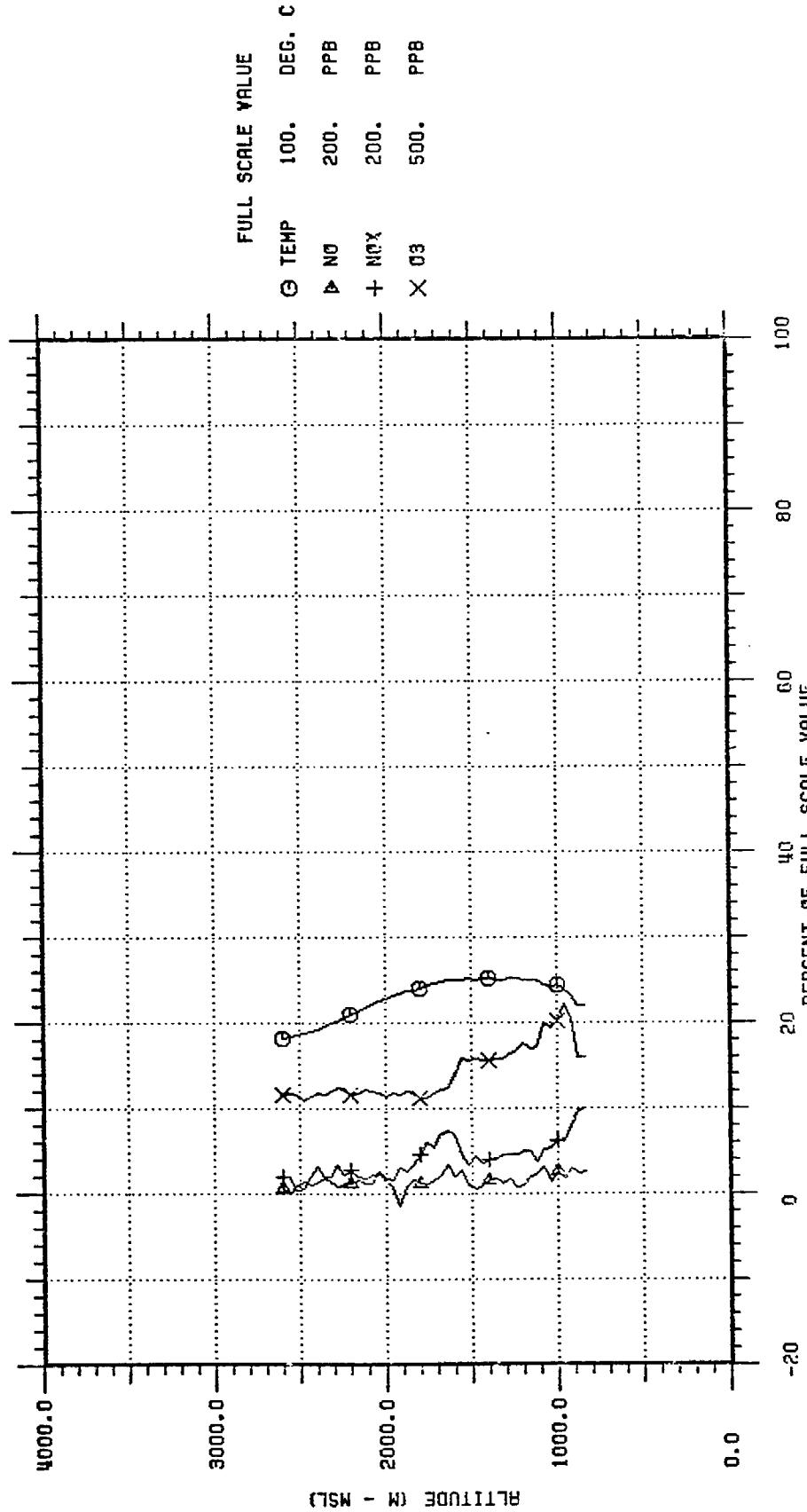
TAPE/PASS: 255/3 DATE: 7 /19/81
TIME: 759 TO 814 (PDT)



800925.1
19:05:43

SED TRANSPORT
SPIRAL AT POINT 3

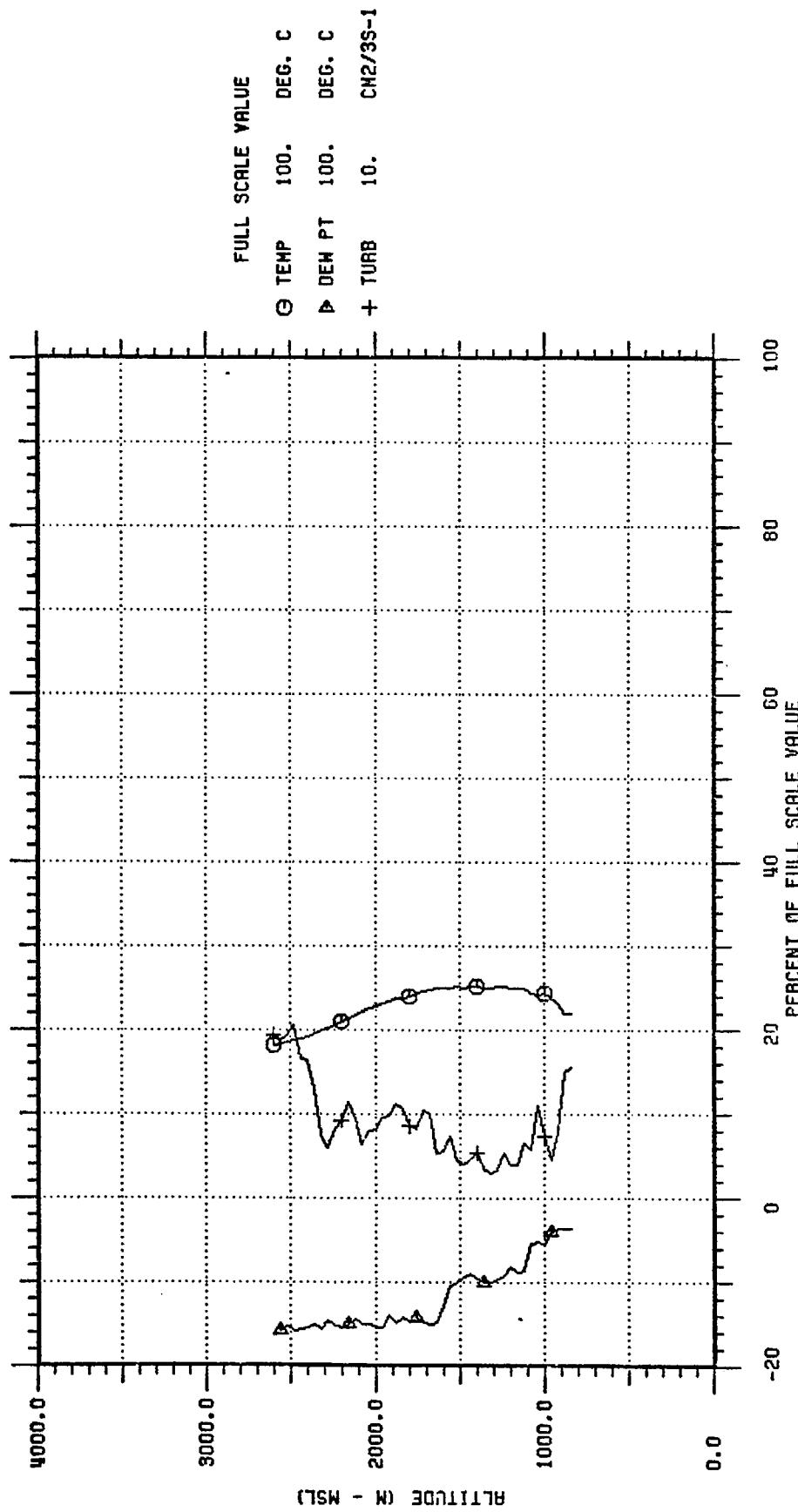
TAPE/PASS: 255/3 DATE: 7 /19/81
TIME: 759 TO 814 (PDT)



600925.1
14:05:43

SED TRANSPORT
SPIRAL AT POINT 3

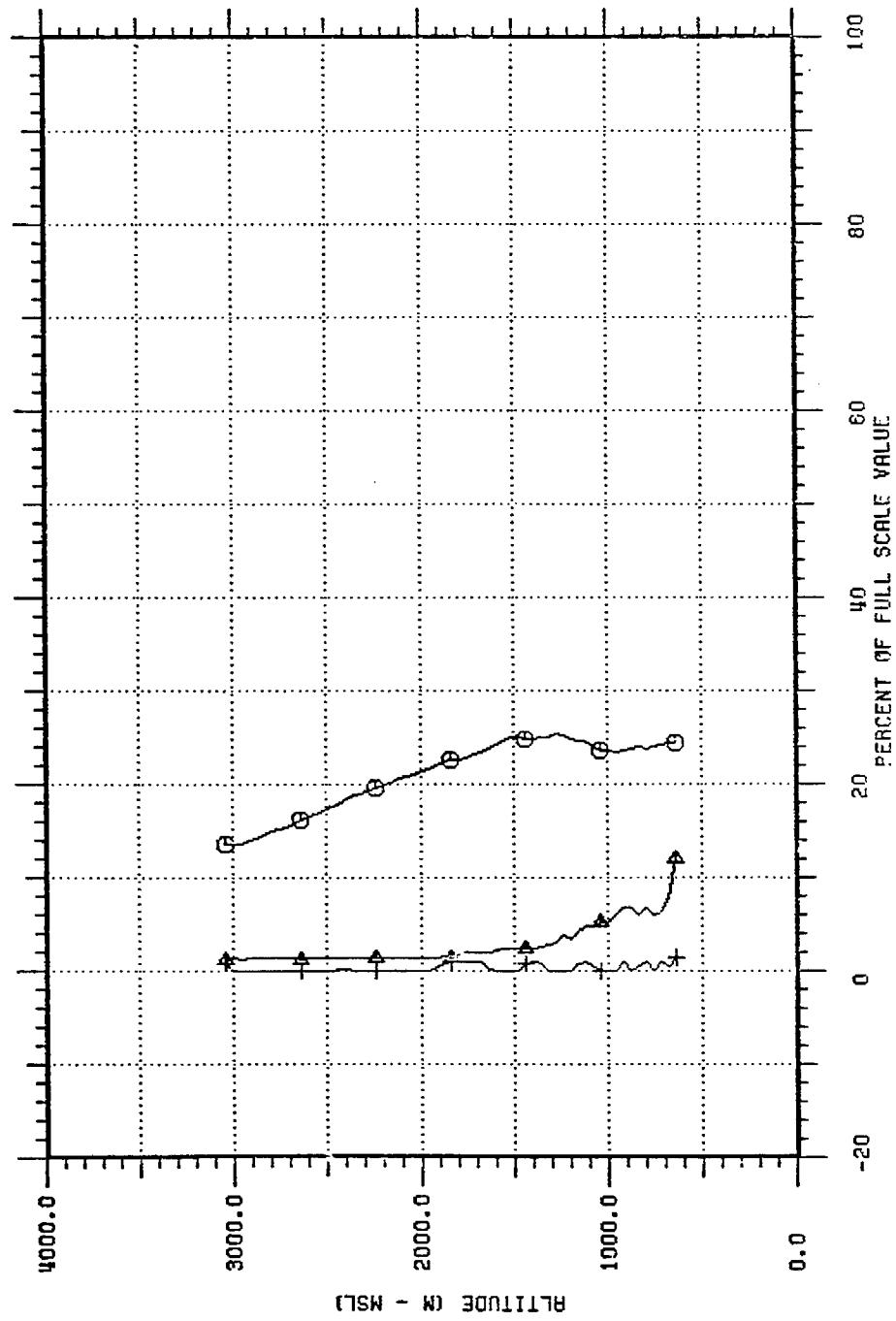
TAPE/PASS: 255/3 DATE: 7 /19/81
TIME: 759 TO 814 (PDT)



8000925.1
14:05:43

SED TRANSPORT
SPIRAL AT POINT 4

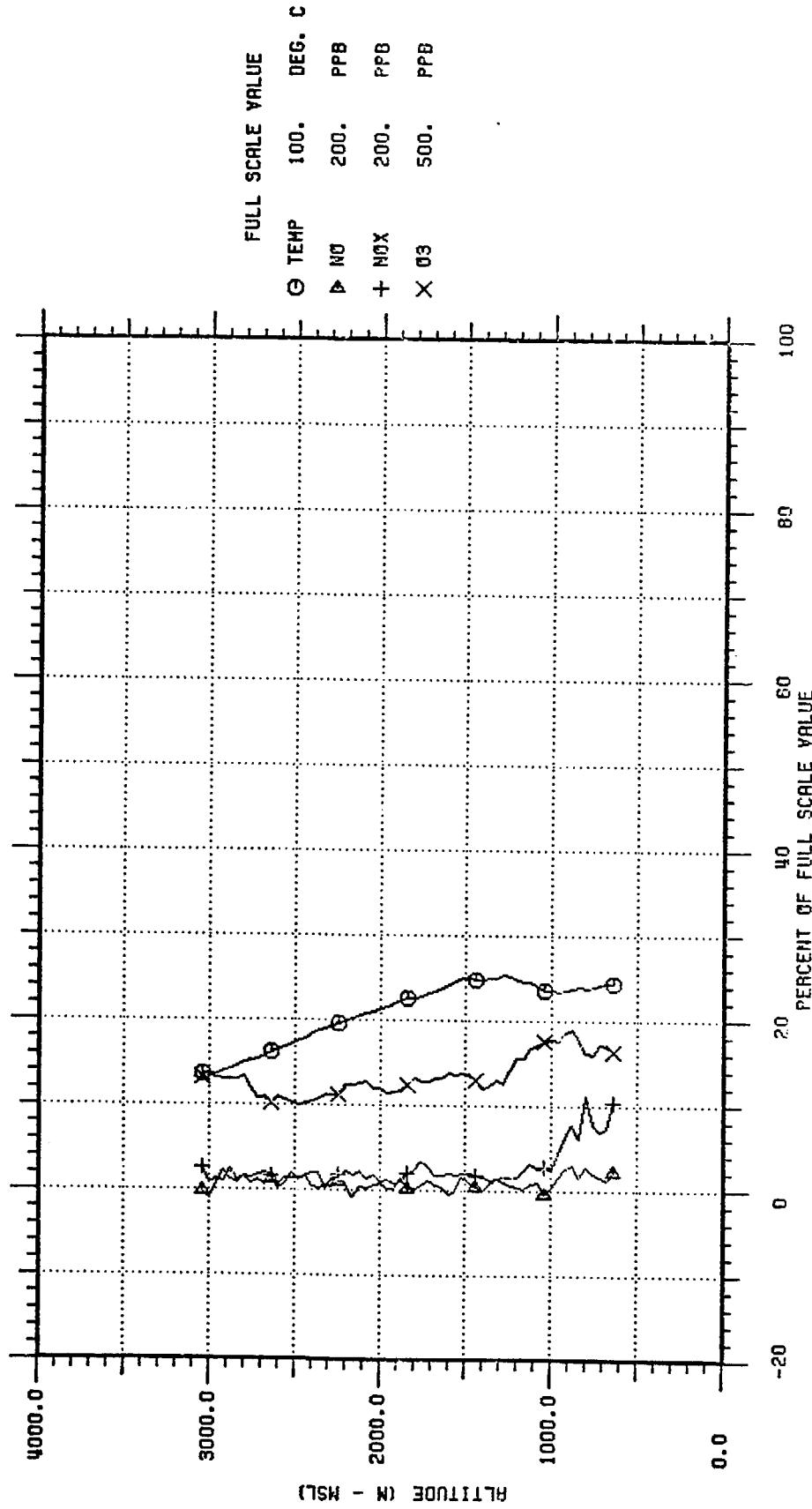
TAPE/PASS: 255/4 DATE: 7 /19/81
TIME: 827 TO 644 (PDT)



800925.1
14:05:43

SED TRANSPORT
SPHERE AT POINT 4

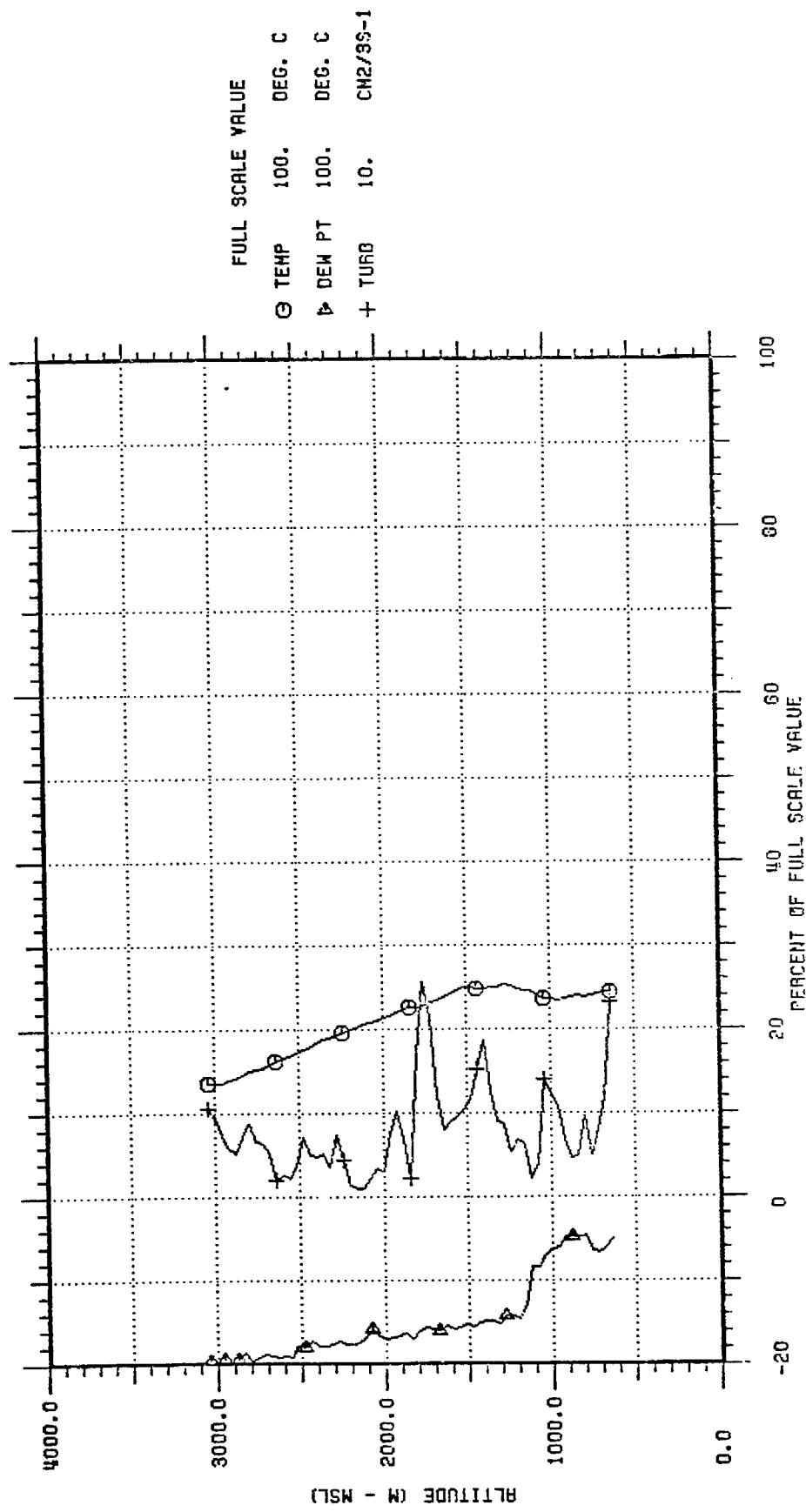
TAPE/PASS: 255/4 DATE: 7 /19/81
TIME: 827 TO 844 (PDT)



800925.1
14:35:43

SED TRANSPORT
SPIRAL AT POINT 4

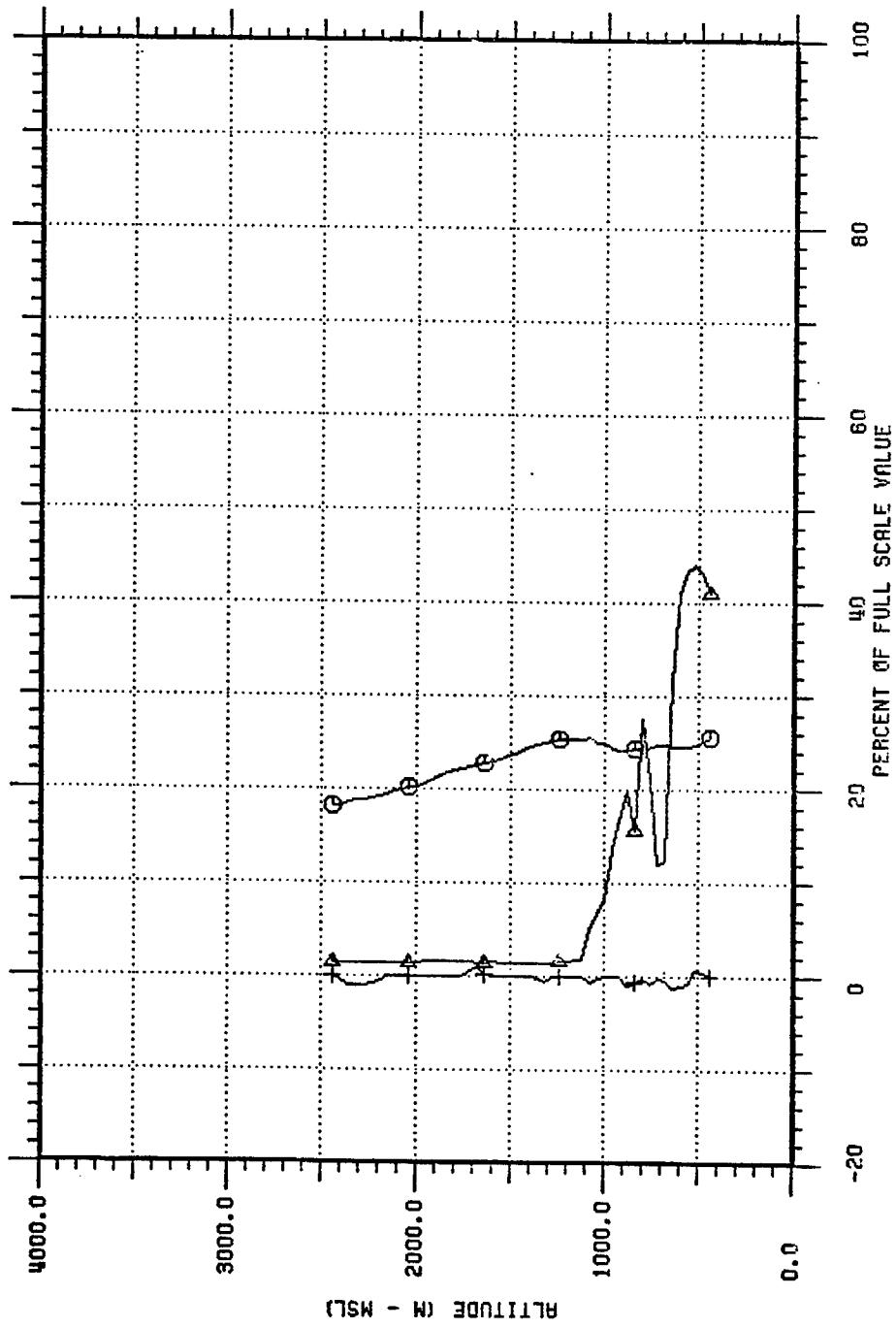
TAPE/PASS: 255/4 DATE: 7/19/81
TIME: 827 TO 844 (PDT)



200025.1
14:05:43

SED TRANSPORT
INSTRUMENT ZEROING

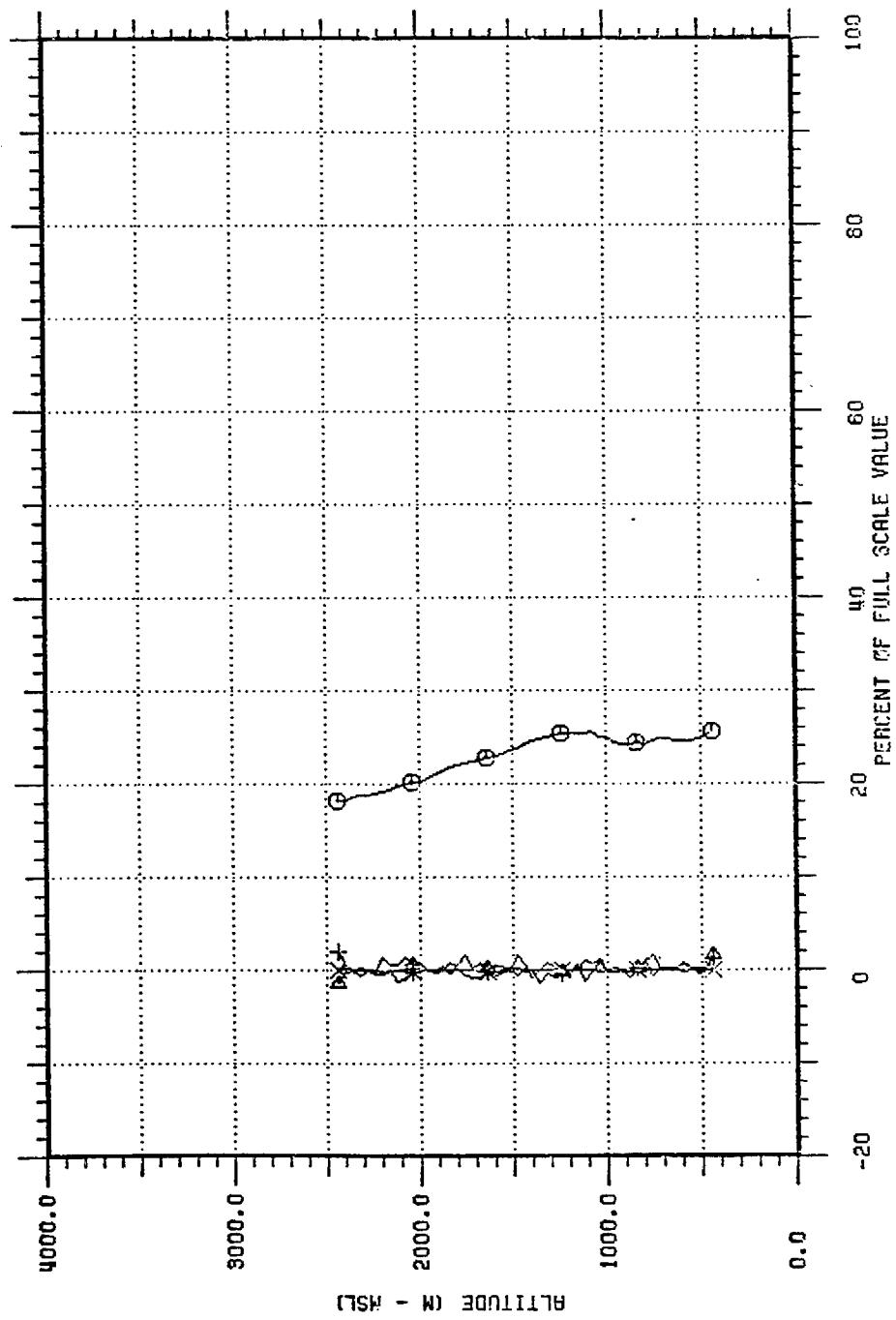
TAPE/PASS: 255/5 DATE: 7 /19/81
TIME: 910 TO 925 (PDT)



800925.1
14:05:43

SED TRANSPORT
INSTRUMENT ZEROING

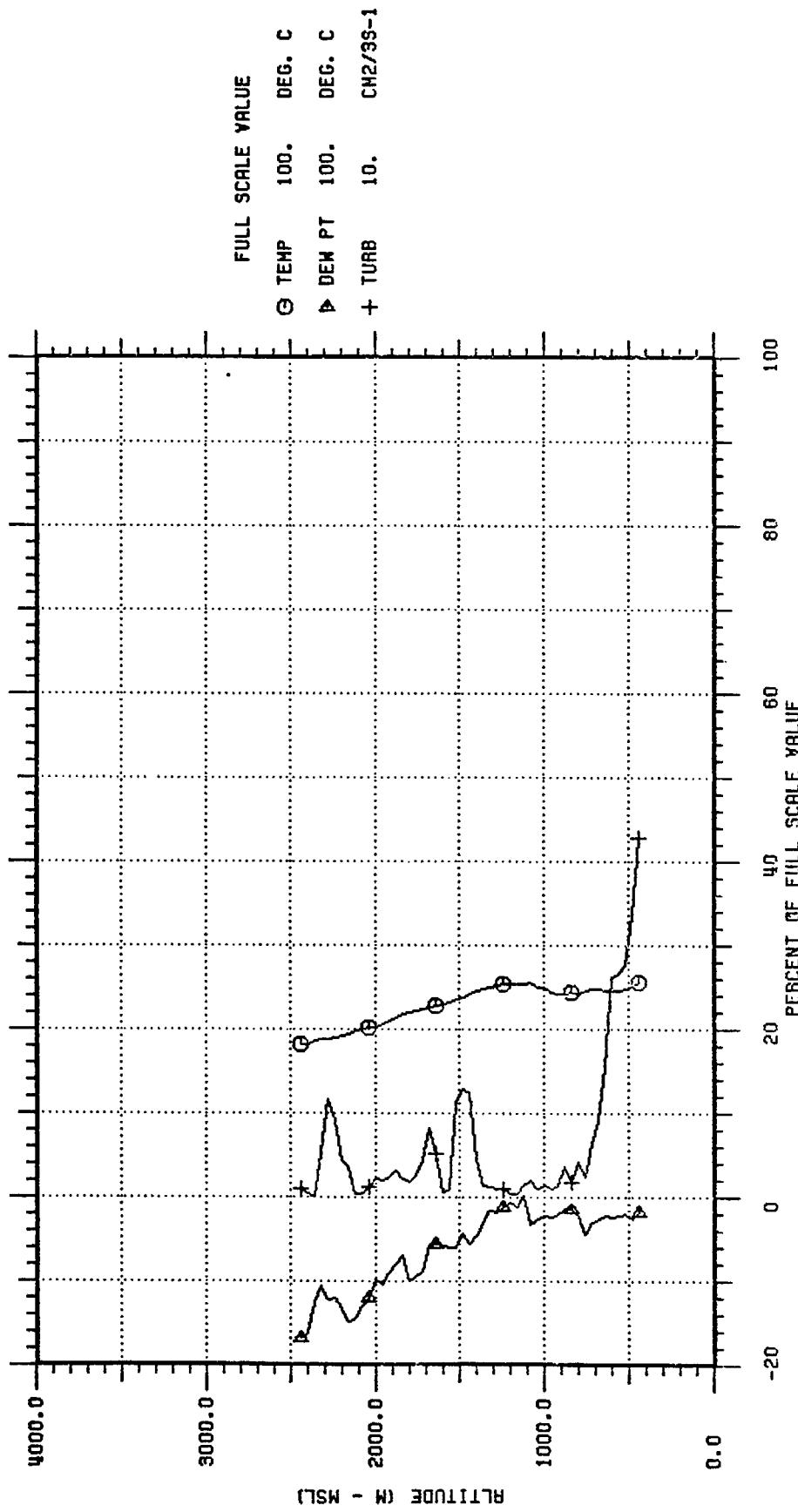
TAPE/PASS: 255/5 DATE: 7/19/81
TIME: 910 TO 925 (PDT)



600925.1
14:05:43

SED TRANSPORT
INSTRUMENT ZEROING

TRAIL/PASS: 255/5 DATE: 7/19/81
TIME: 910 TO 925 (PDT)



800925.1
14:05:43

TEST 4 - JULY 22-23, 1981

Date: July 22, 1981

MRI FLIGHT SUMMARY

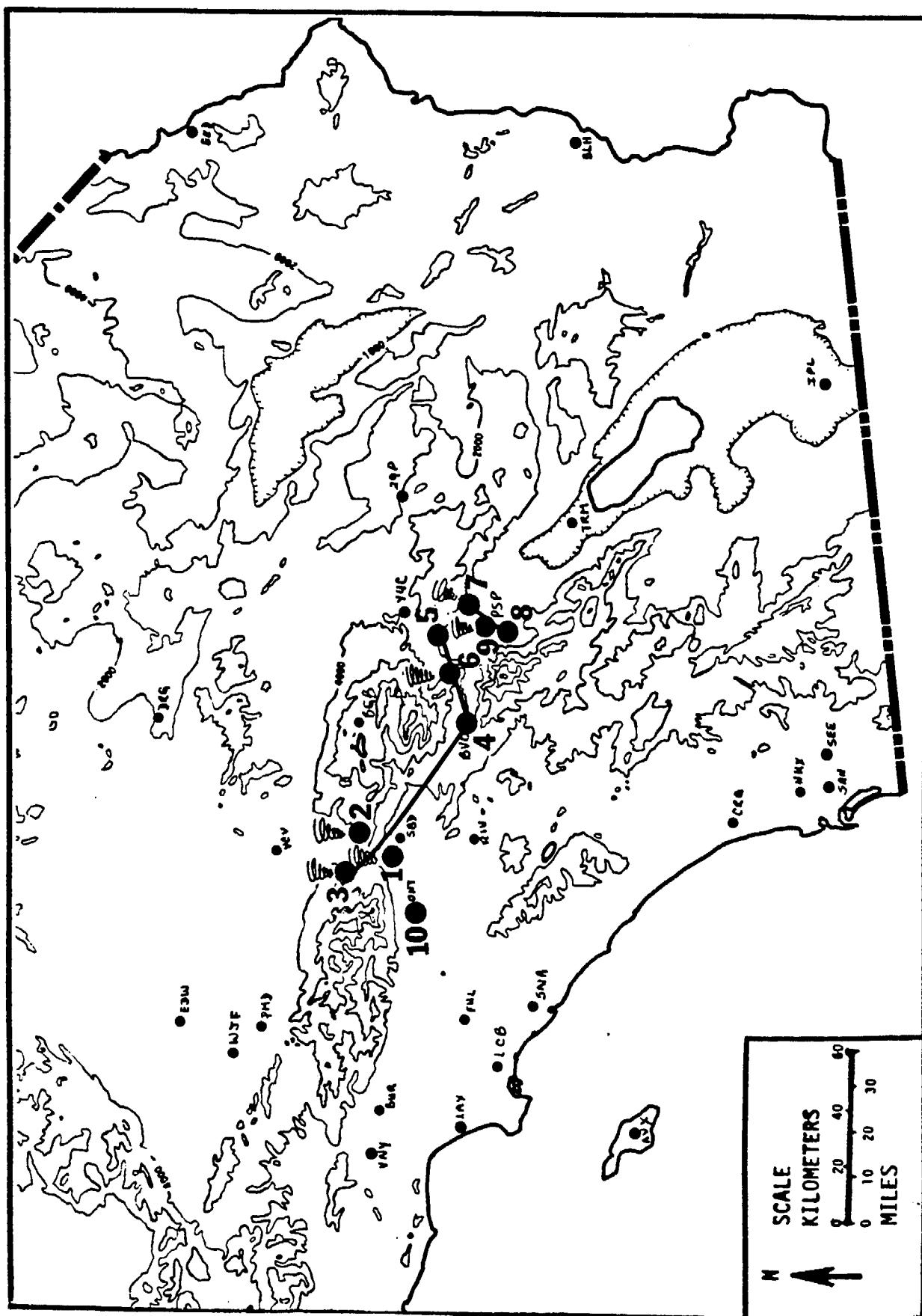
SOUTHEAST DESERT OZONE TRANSPORT STUDY

Tape #: 256

Pass No.	Sampling Times Start (PDT) End	Flight Type	End Points	Sampling Altitude m MSL Start End	Traverse Length or Orbit Time	Tracer Samples	Comments
1	1635	1705	Spiral	1	442-3353	N.A.	F1-20 Sfc Elev = 438 m
2	1711	1723	Spiral	2	3353-1417	N.A.	F21-34 Sfc Elev = 1372 m
3	1742	1759	Spiral	3	3353- 899	N.A.	F35-51 Sfc Elev = 890 m
4	1802	1824	Traverse	3 - 4	991- 914	80.5 Km.	F52-74
5	1827	1834	Traverse	4 - 5	975	30.0 Km.	F75-82
6	1846	1917	Spiral	6	366-3658	N.A.	F83-105 Sfc Elev = 360 m
7	1924	1947	Spiral	7	3658- 488	N.A.	F106-127 Sfc Elev = 366 m
8	1949	1953	Traverse	7 - 8	518	12.9 Km.	F128-132
9	1956	2002	Spiral	9	140- 914	N.A.	F133-138 Sfc Elev = 137 m
10	2003	2039	Traverse	9 - 10	914	108.7 Km.	F139-167

22 July Tape #256
 TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°07.5'	117°23'	Rialto Airport
2	34°14.5'	117°16.0'	Lake Gregory
3	34°18.8'	117°28.5'	Cajon Junction
4	33°55.0'	116°51.3'	Banning Airport
5	33°55.5'	116°32.5'	7 miles east of Point 6
6	33°55.2'	116°40.5'	Intersection of Hwys 10 and 111
7	33°52.0'	116°26.0'	Over PSP VOR
8	33°47.0'	116°31.5'	PSP 210° Radial/6.9 nm
9	33°49.5'	116°30.5'	Palm Springs Airport
10	34°06.0'	117°37.3'	3 1/2 miles east of Cable Airport



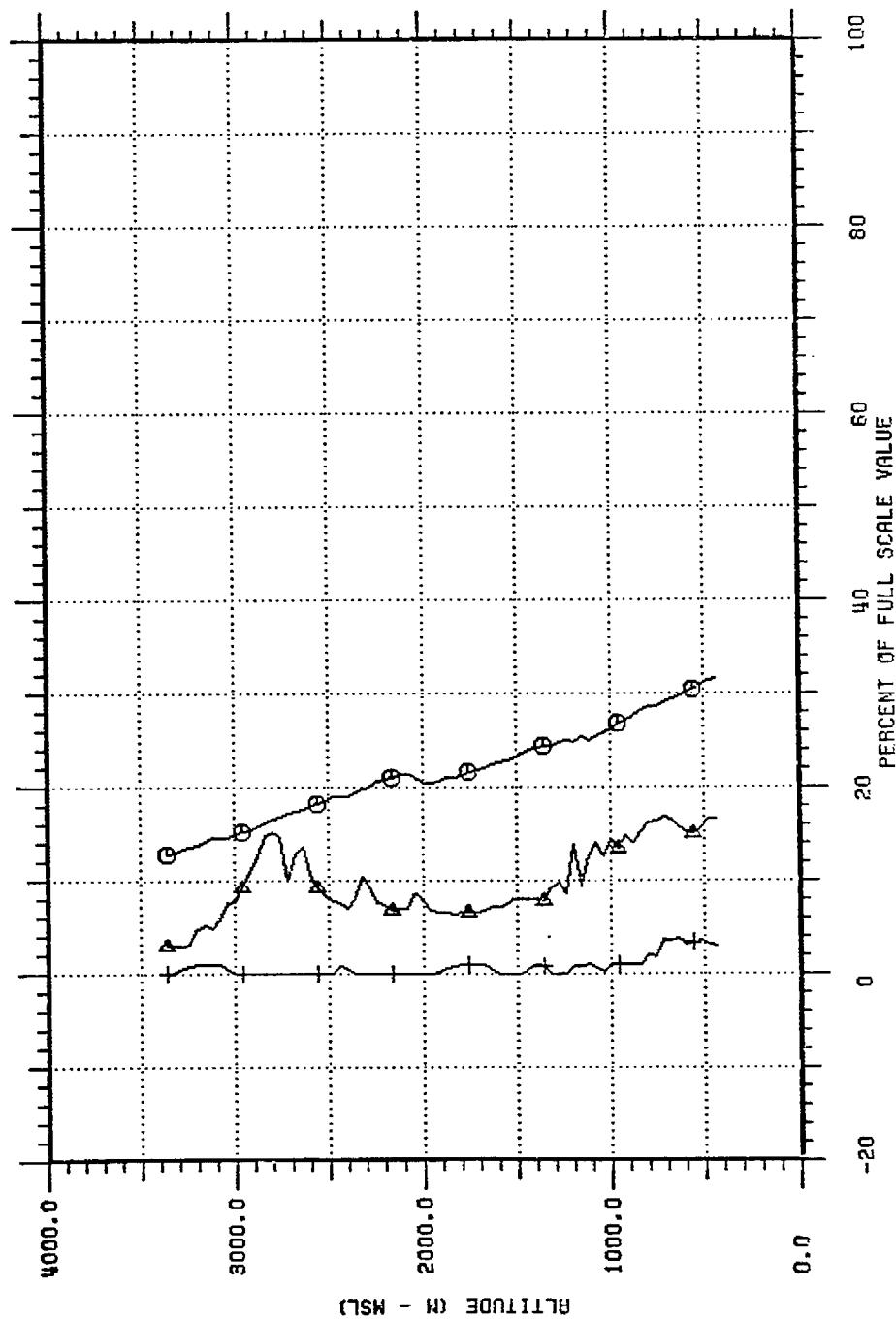
SOUTHEAST DESERT OZONE TRANSPORT STUDY

MRI SAMPLING FLIGHT

July 22, 1981
Tape #256

SED TRANSPORT
SPIRAL AT POINT 1

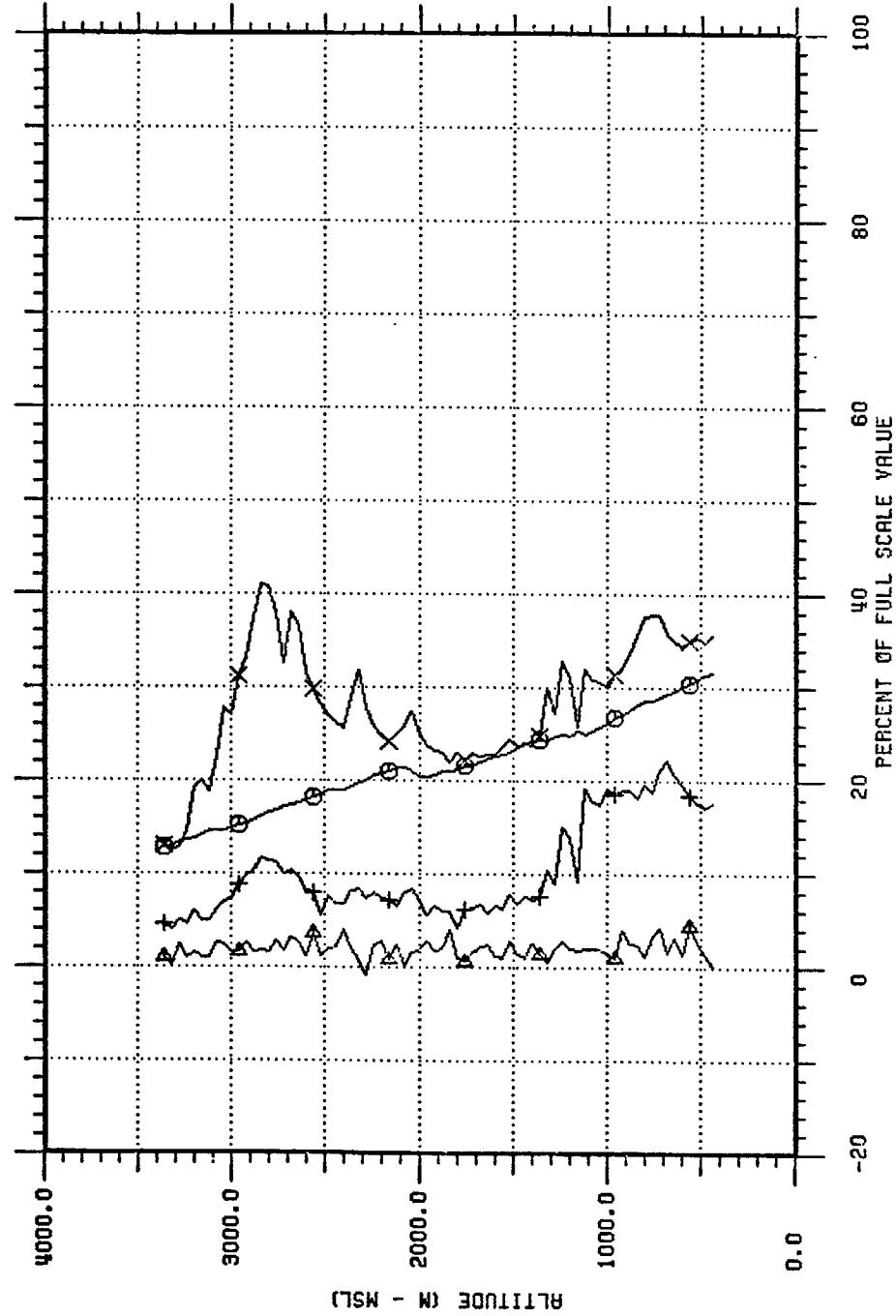
TAPE/PASS: 256/1 DATE: 7 /22/81
TIME: 1635 TO 1705 (PDT)



800925.1
19:30:37

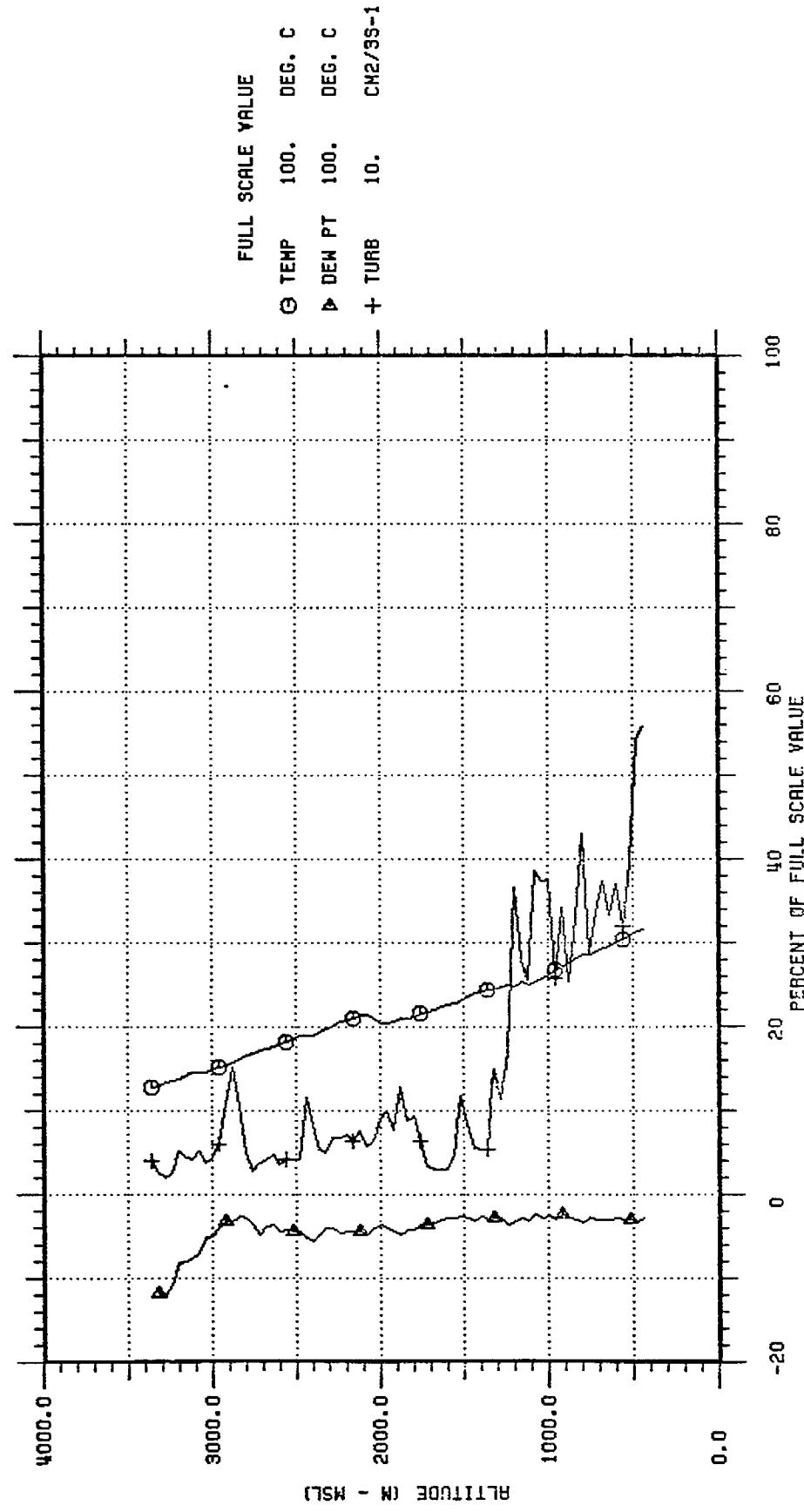
SED TRANSPORT
SPIRAL AT POINT 1

TAPE/PASS: 256/1 DATE: 7 /22/81
TIME: 1635 TO 1705 (PDT)



SED TRANSPORT
SPIRAL AT POINT 1

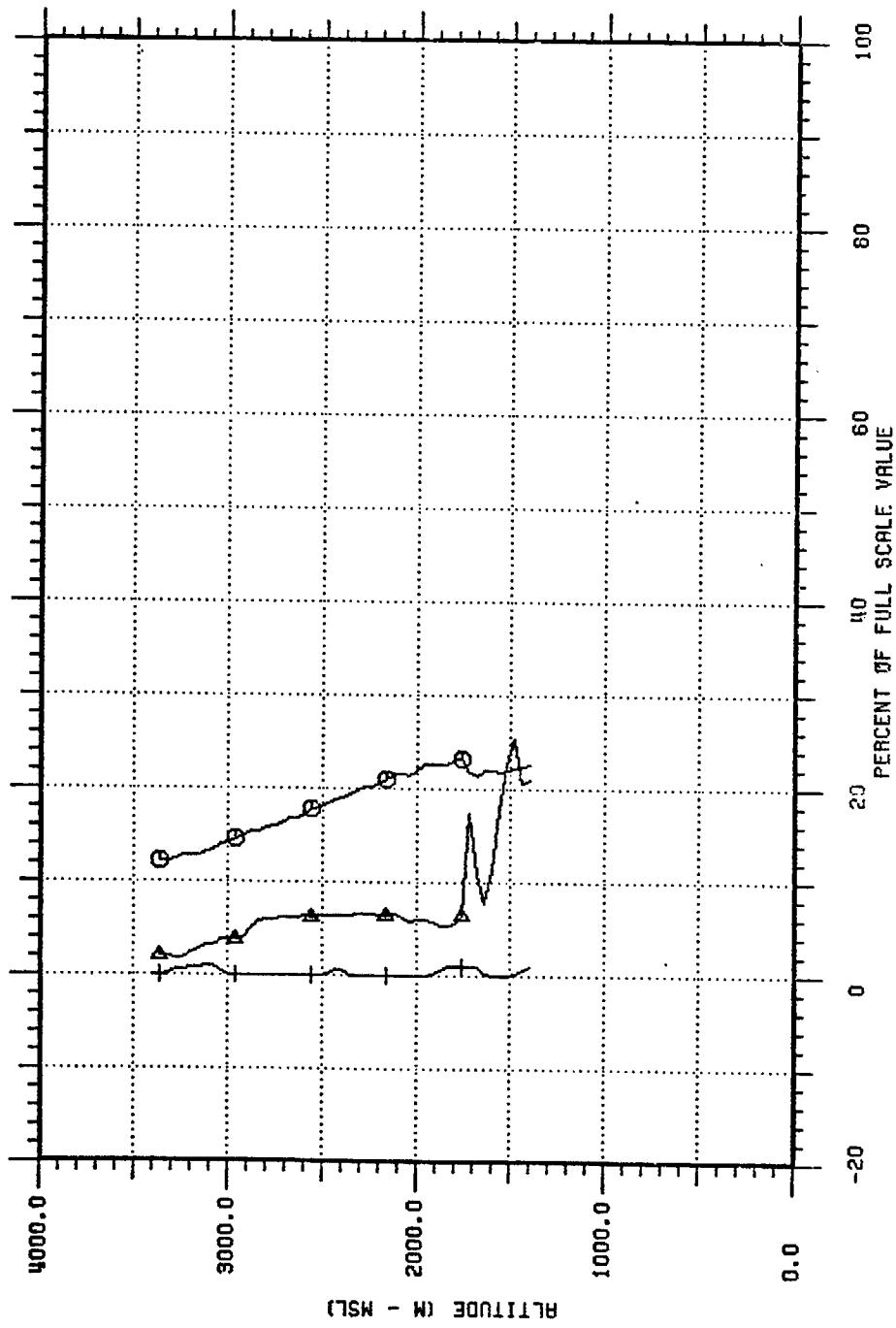
TAPE/PASS: 256/1 DATE: 7 /22/81
TIME: 1635 TO 1705 (PDT)



800925:1
19:30:37

SED TRANSPORT
SPIRAL AT POINT 2

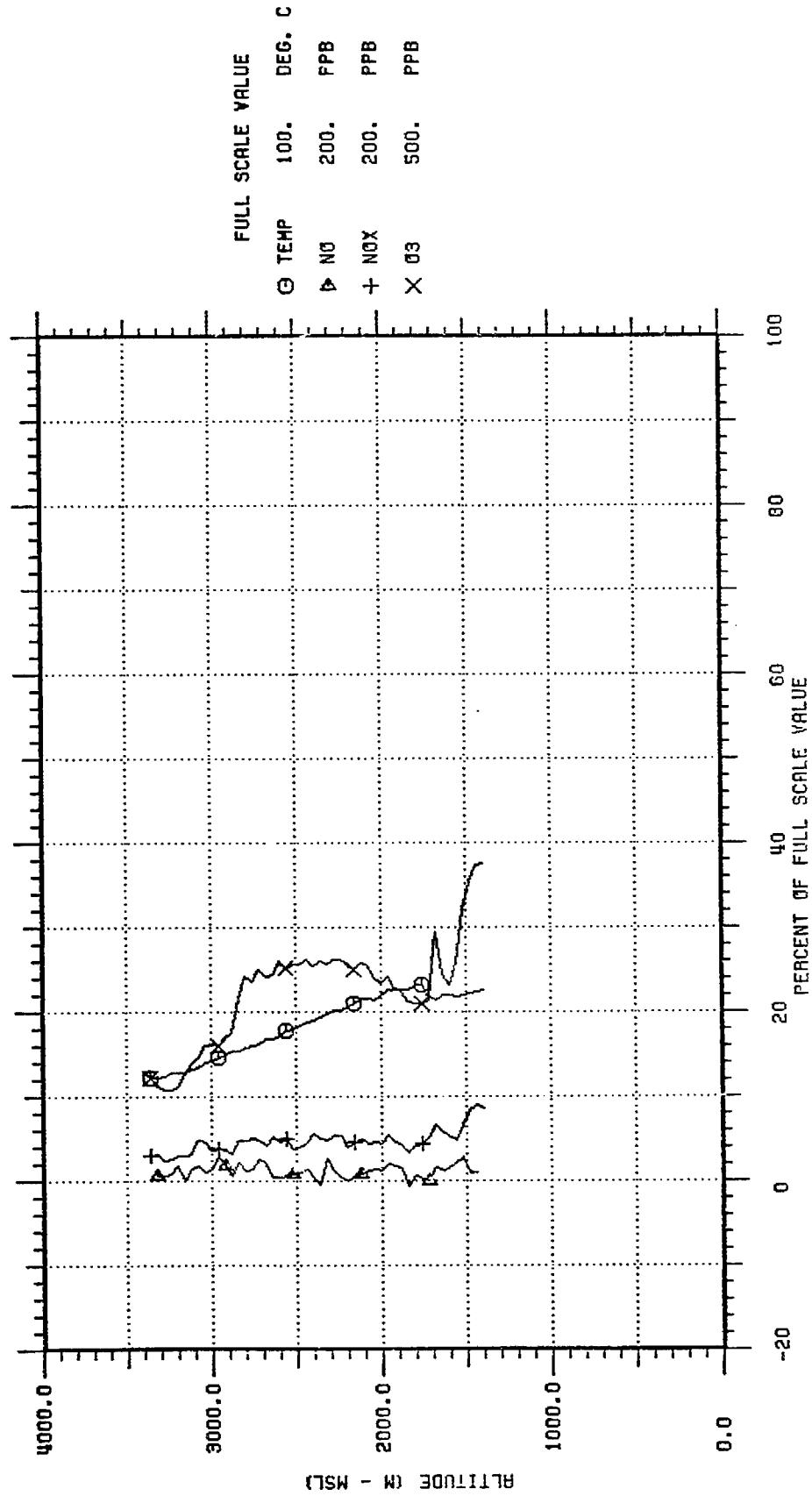
TAPE/PASS: 256/2 DATE: 7 /22/81
TIME: 1711 TO 1723 (PDT)



800925.1
19:30:37

SED TRANSPORT
SPIRAL AT POINT 2

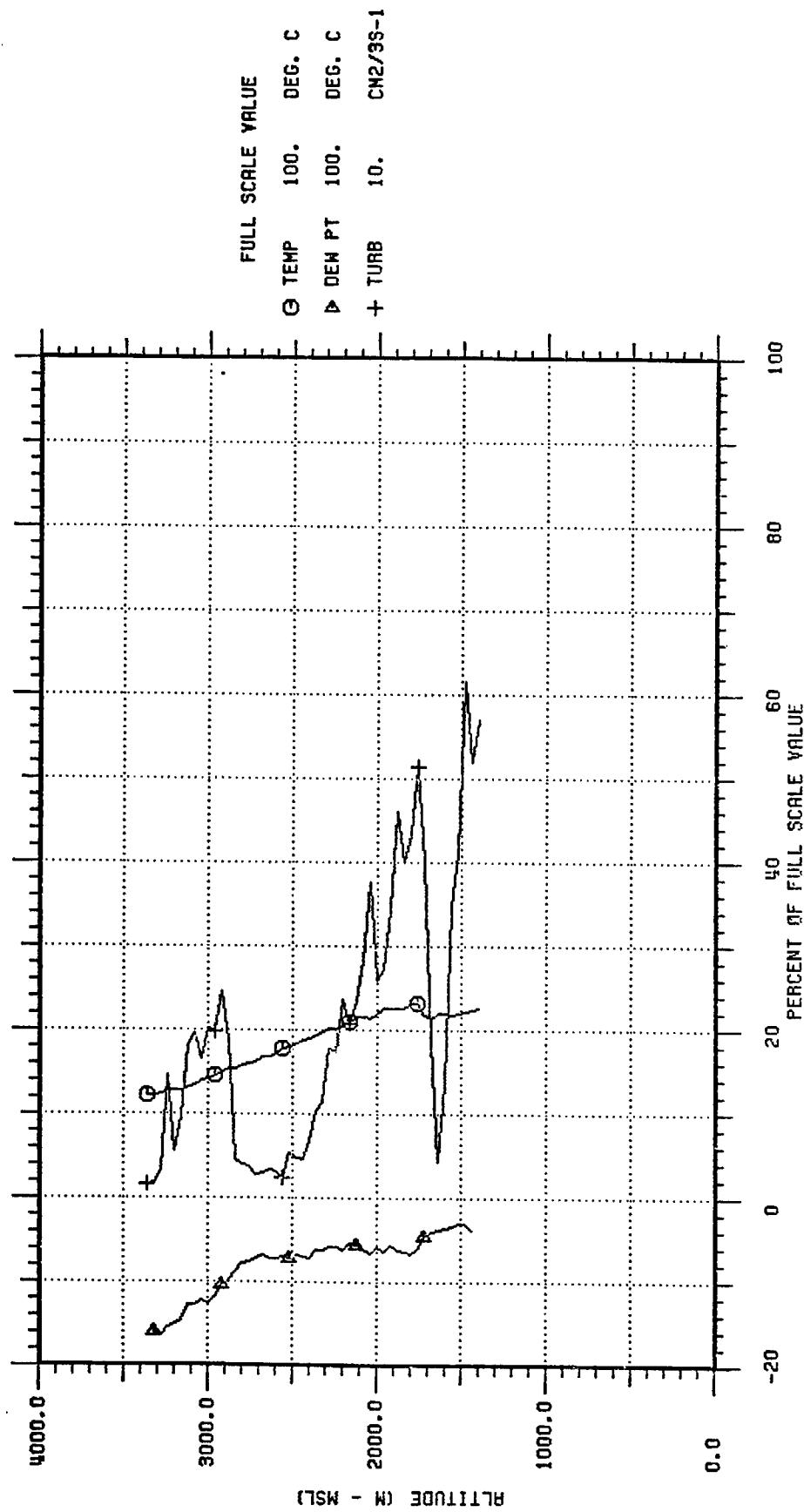
TAPE/PASS: 256/2 DATE: 7 /22/81
TIME: 1711 TO 1729 (PDT)



600925.1
19:30:37

SED TRANSPORT
SPIRAL AT POINT 2

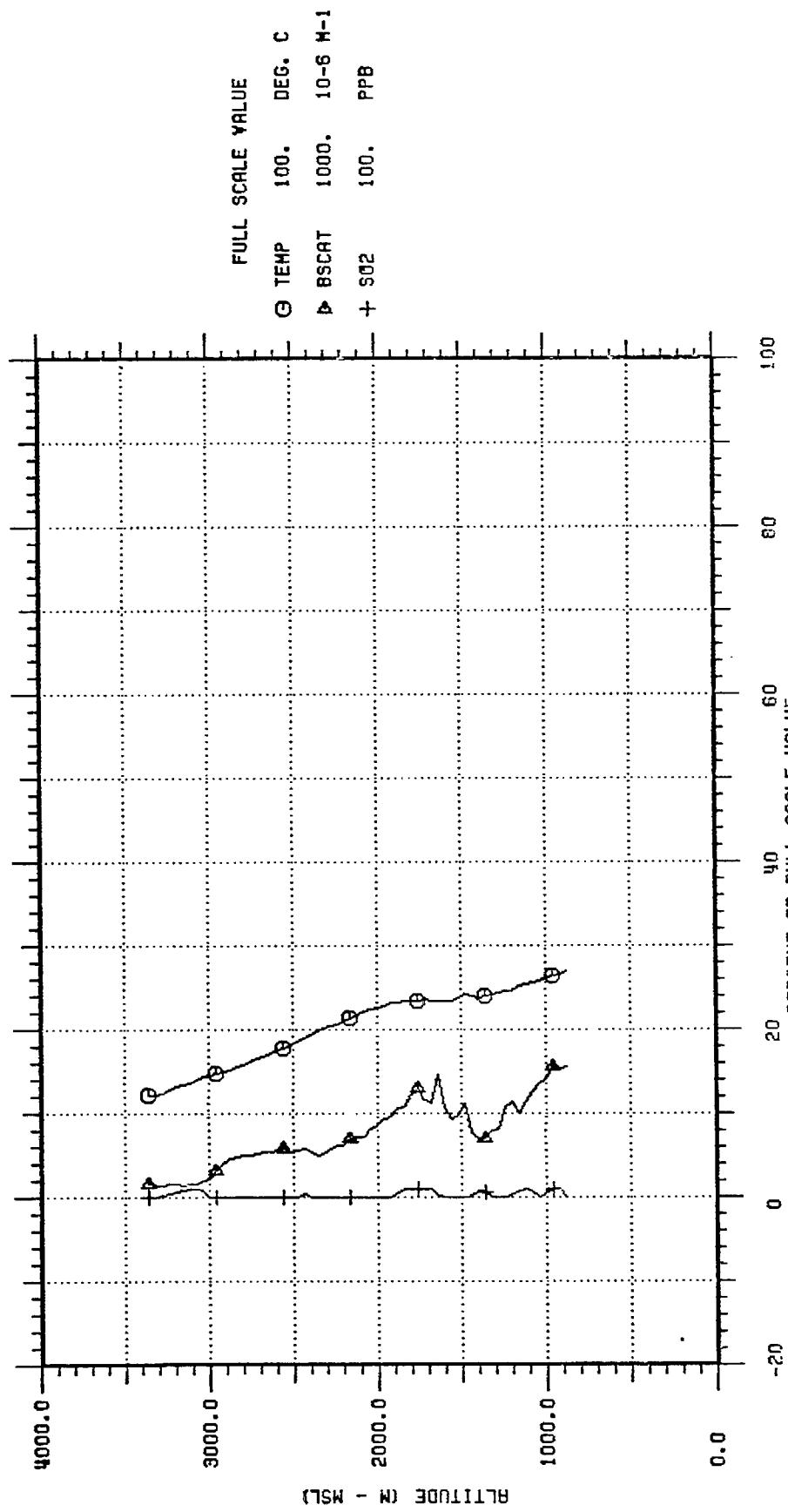
TAPE/PASS: 256/2 DATE: 7 /22/81
TIME: 1711 TO 1723 (PDT)



800925.1
19:30,37

SED TRANSPORT
SPIRAL AT POINT 3

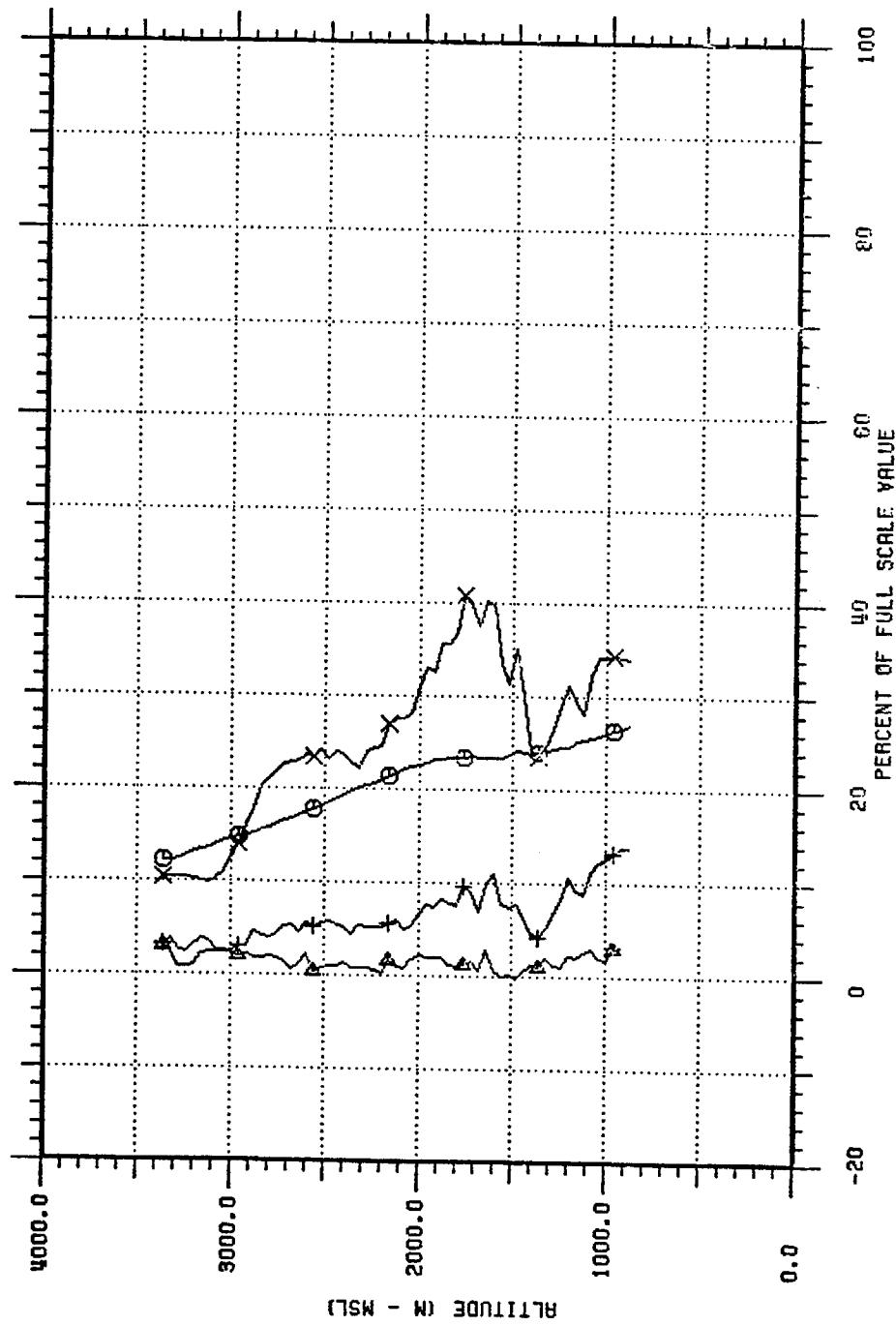
TAPE/PASS: 256/3 DATE: 7 /22/81
TIME: 1742 TO 1759 (PDT)



800925.1
19:30:37

SED TRANSPORT
Spiral at Point 3

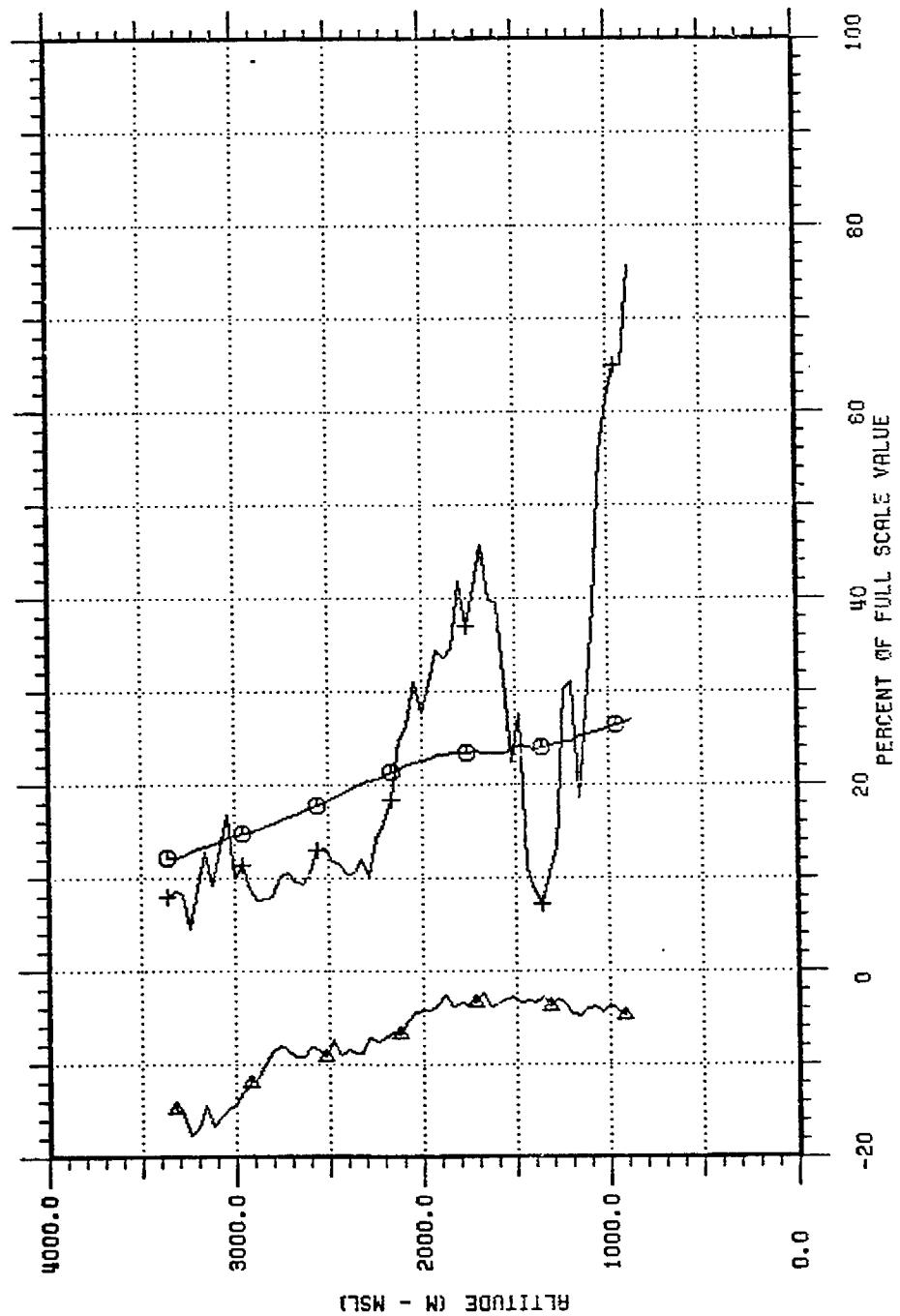
TAPE/PASS: 256/3 DATE: 7/22/81
TIME: 1742 TO 1759 (PDT)



860925.1
19:30:37

SED TRANSPORT
SPIRAL AT POINT 3

TAPE/PASS: 256/3 DATE: 7 /22/81
TIME: 1742 TO 1759 (PDT)

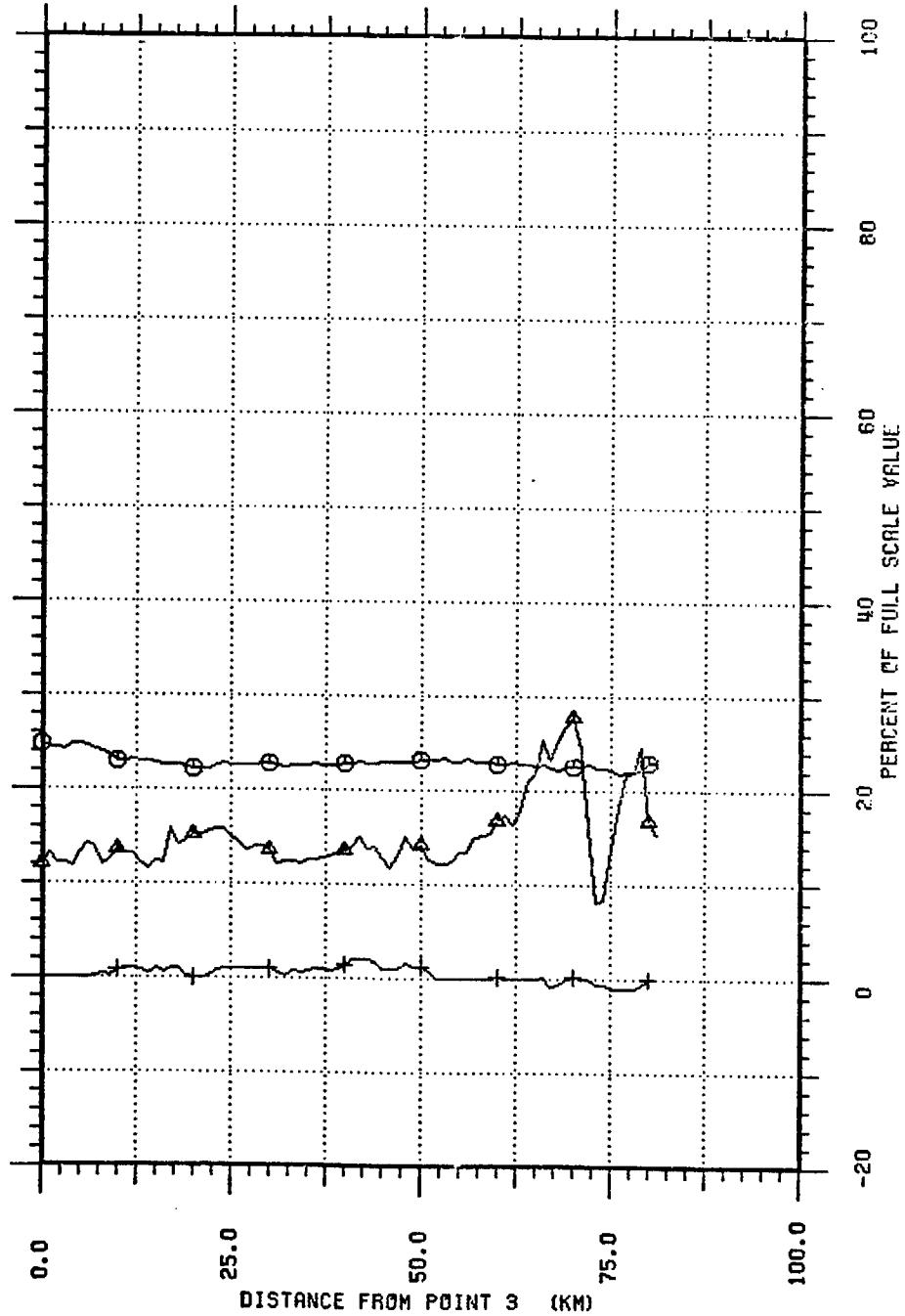


600925.1
19:30:37

SED TRANSPORT

TRAVESE FROM POINT 3 TO POINT 4 (991 M MSL)

TAPE/PASS: 256/4 DATE: 7/22/81
TIME: 1802 TO 1824 (PDT)

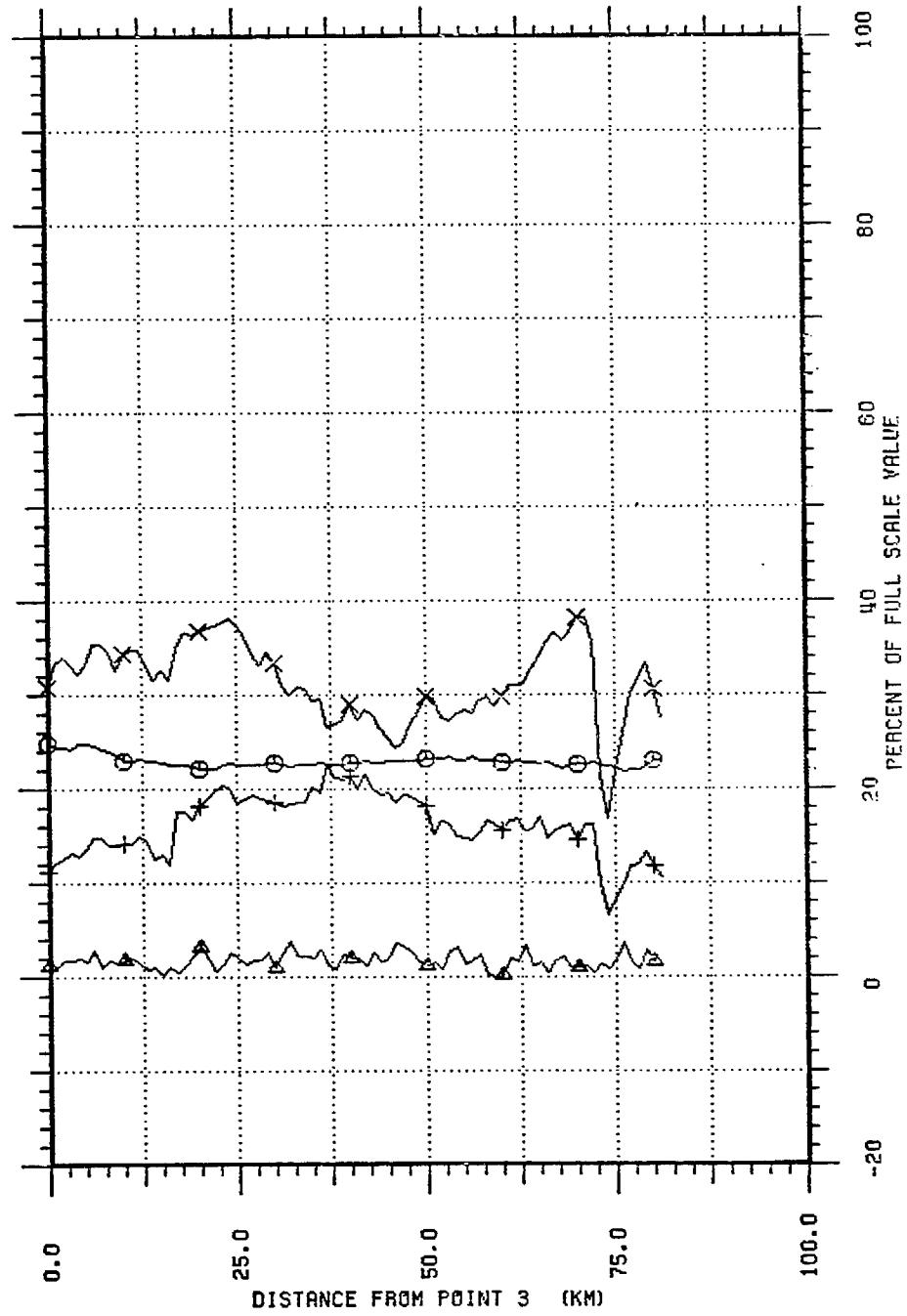


800925.1
19:36:02

SED TRANSPORT

TRAVESE FROM POINT 3 TO POINT 4 (991 M MSL)

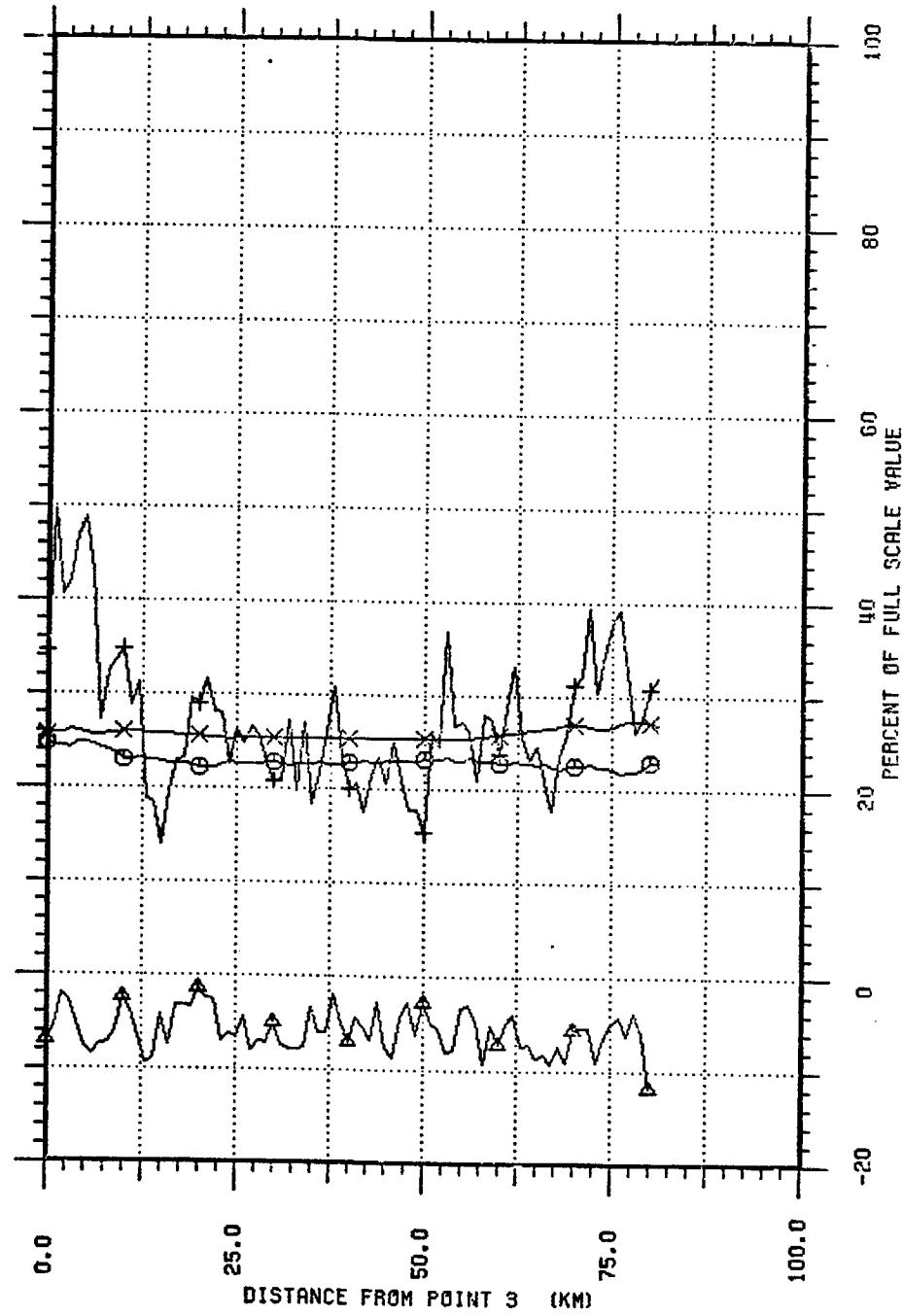
TAPE/PASS: 256/4 DATE: 7 /22/81
TIME: 1802 TO 1824 (PDT)



890925.1
19.56;02

SED TRANSPORT

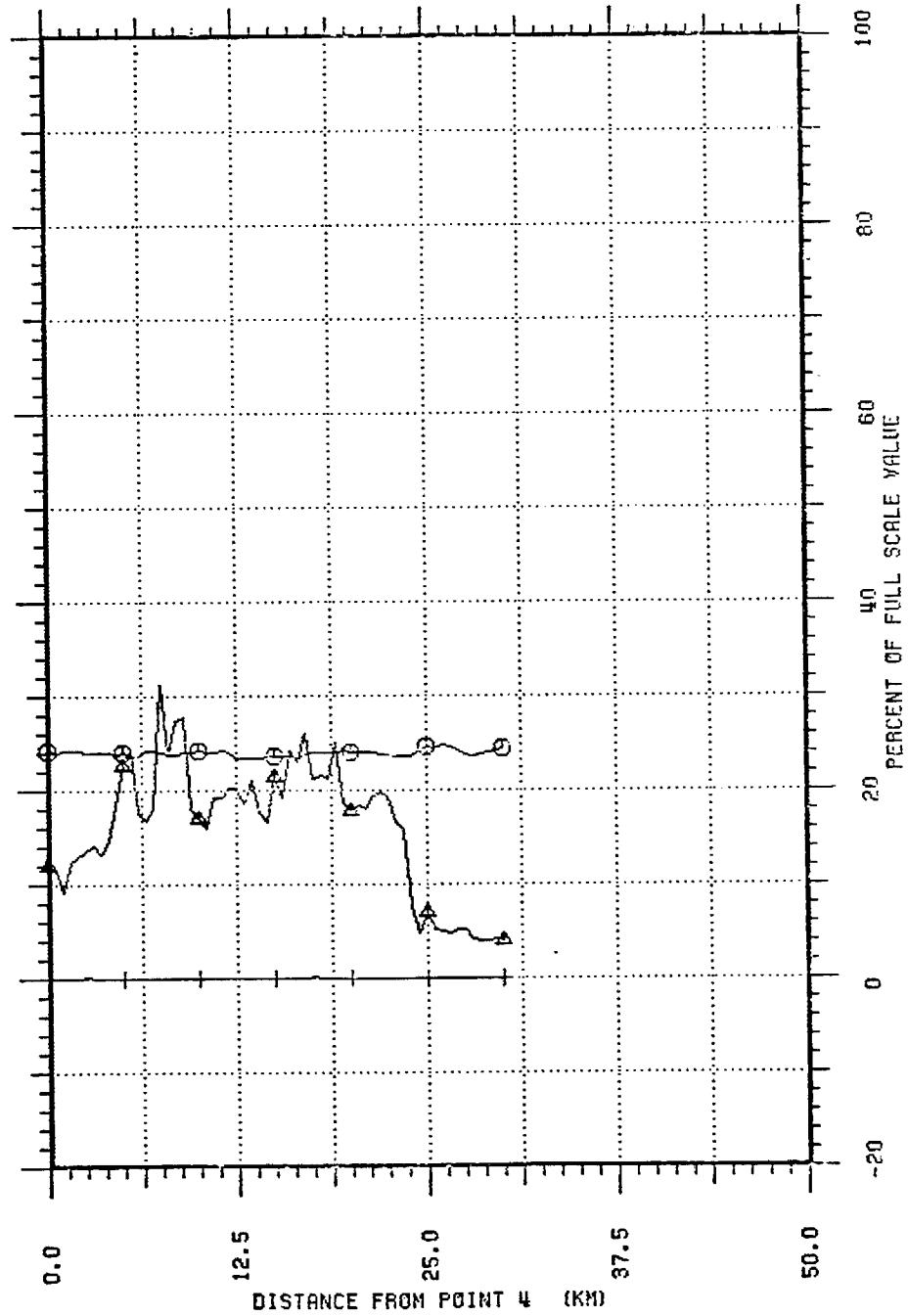
TRaverse from POINT 3 TO POINT 4 (991 M MSL) TAPE/PASS: 256/4 DATE: 7/22/81
TIME: 1802 TO 1824 (PDT)



800925.1
19:56:02

SED TRANSPORT
TRaverse from POINT 4 TO POINT 5 (975 M MSL)

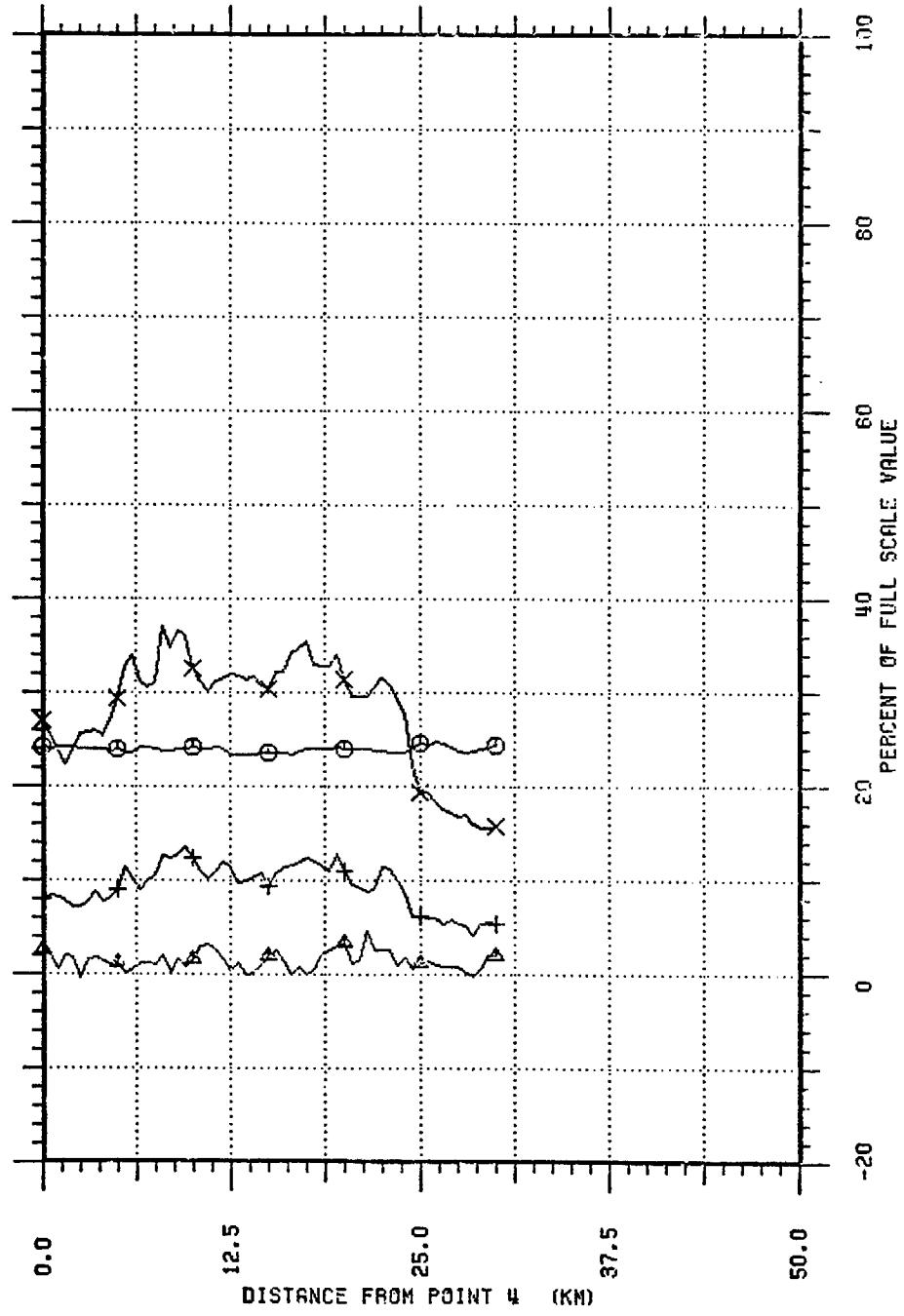
TAPE/PASS: 256/5 DATE: 7/22/81
TIME: 1827 TO 1834 (PDT)



800925.1
19:58:02

SED TRANSPORT

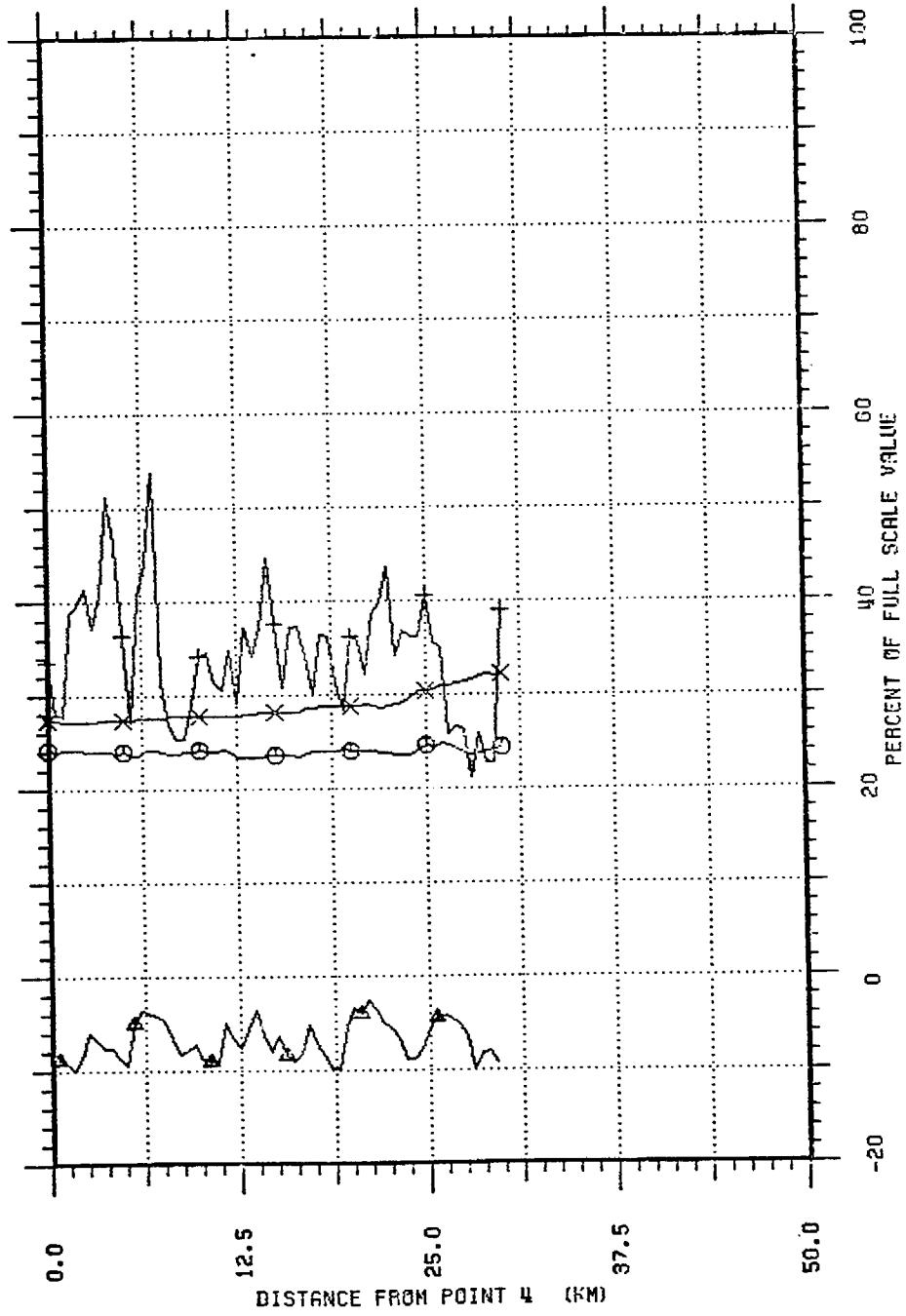
TAPE/PASS: 256/5 DATE: 7/22/81
TRAVESE FROM POINT 4 TO POINT 5 (975 M MSL) TIME: 1827 TO 1834 (PDT)



P00925.1
19:56:02

SED TRANSPORT
TRAVERSE FROM POINT 4 TO POINT 5 (975 M NSL)

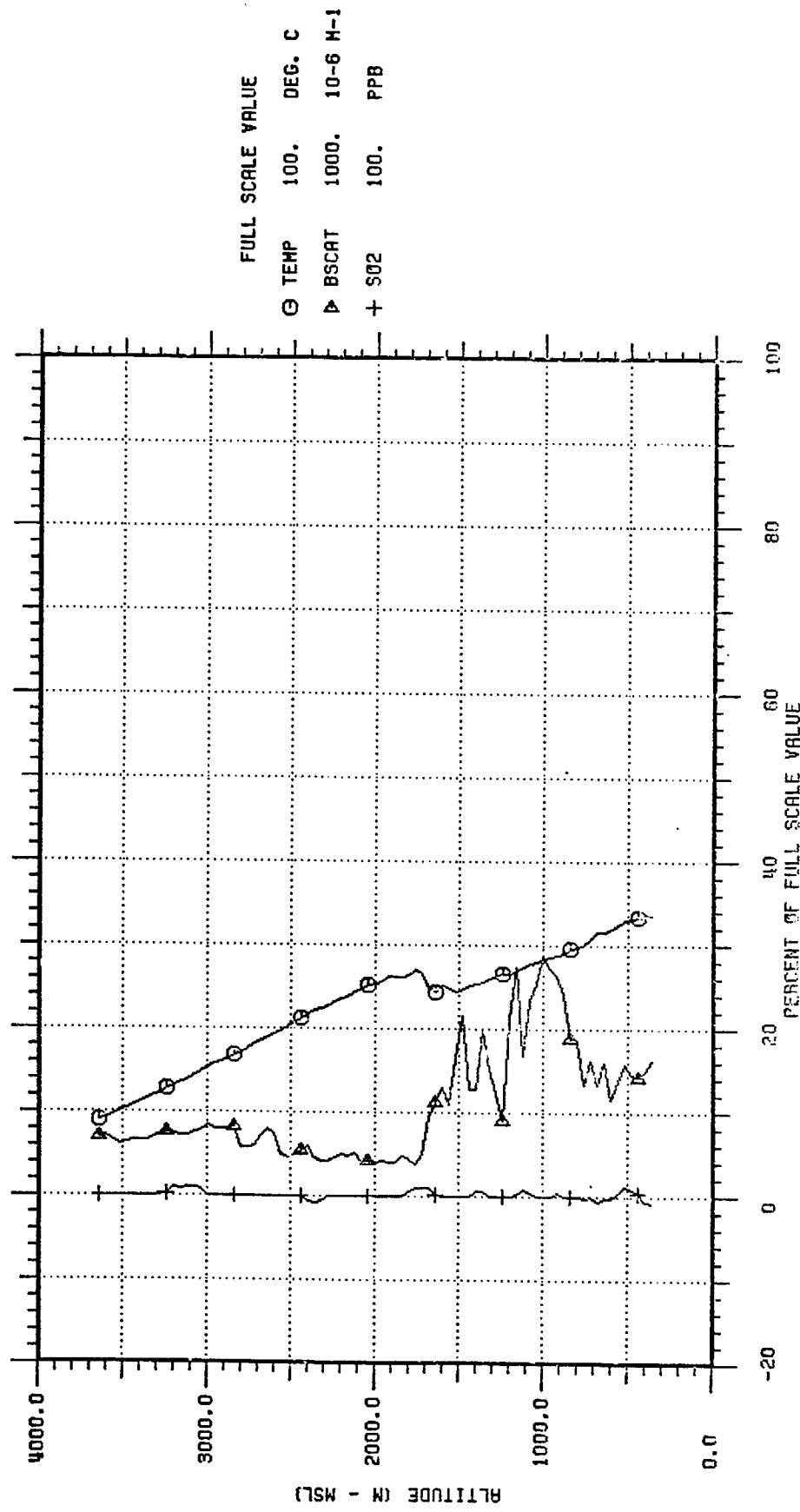
TAPE/PASS: 256/5 DATE: 7/22/81
TIME: 1627 TO 1834 (PDT)



800925.1
19:56:02

SED TRANSPORT
SPIRAL AT POINT 6

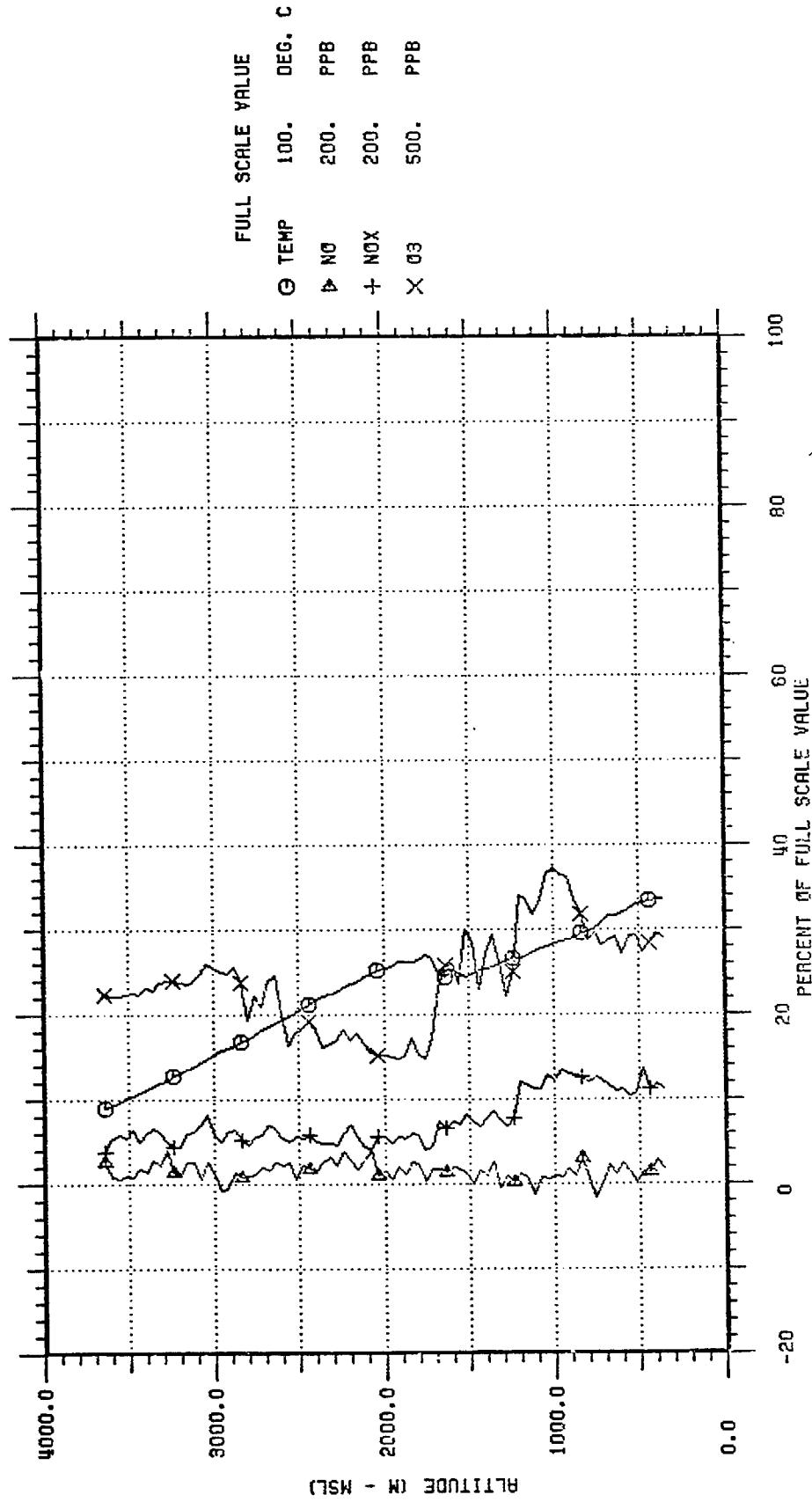
TAPE/PASS: 256/6 DATE: 7 /22/81
TIME: 1846 TO 1917 (PDT)



800925.1
10:30:37

SED TRANSPORT
SPIRAL AT POINT 6

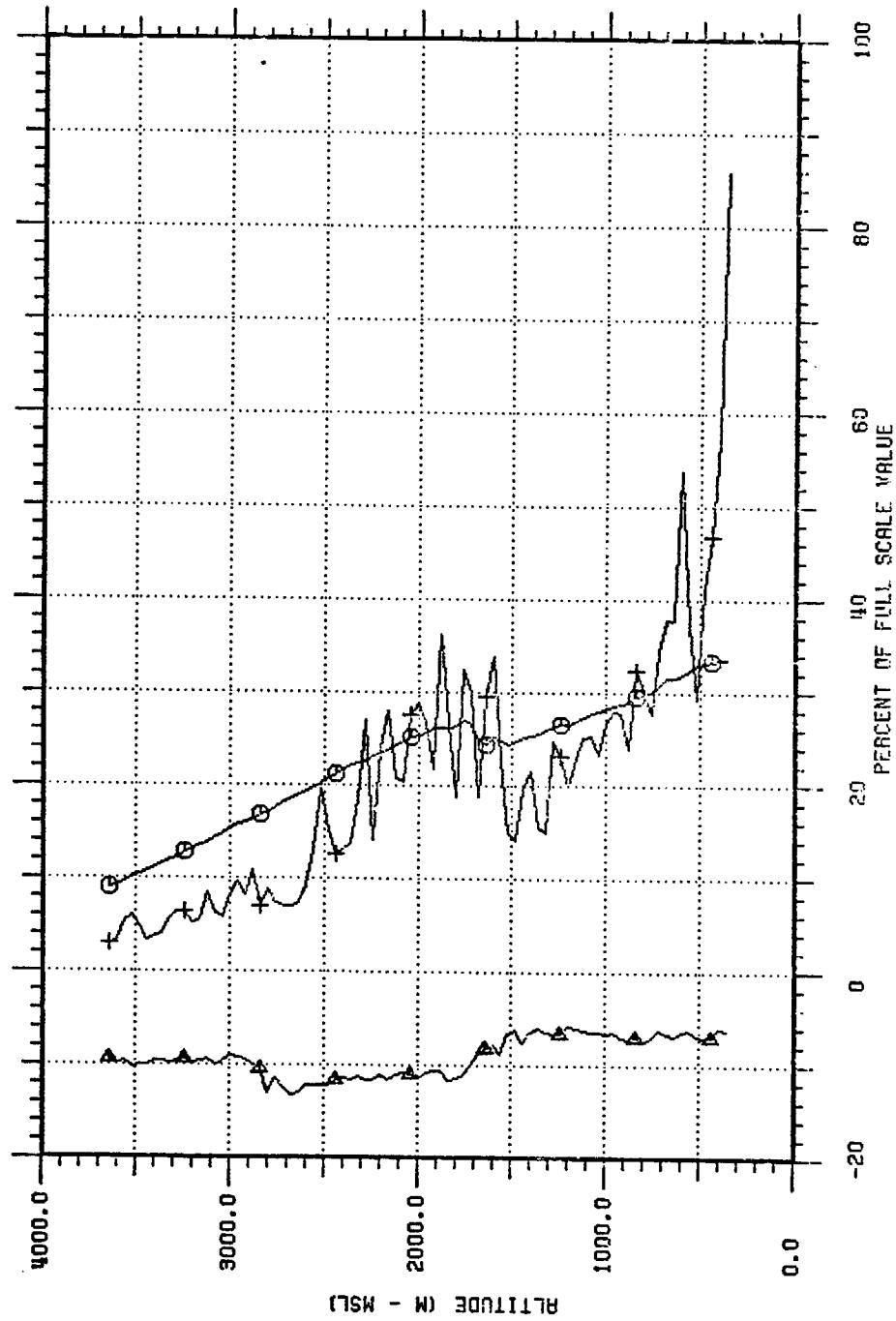
TAPE/PASS: 256/6 DATE: 7/22/81
TIME: 1846 TO 1917 (PDT)



800925.1
19:30:37

SED TRANSPORT
SPIRAL AT POINT 6

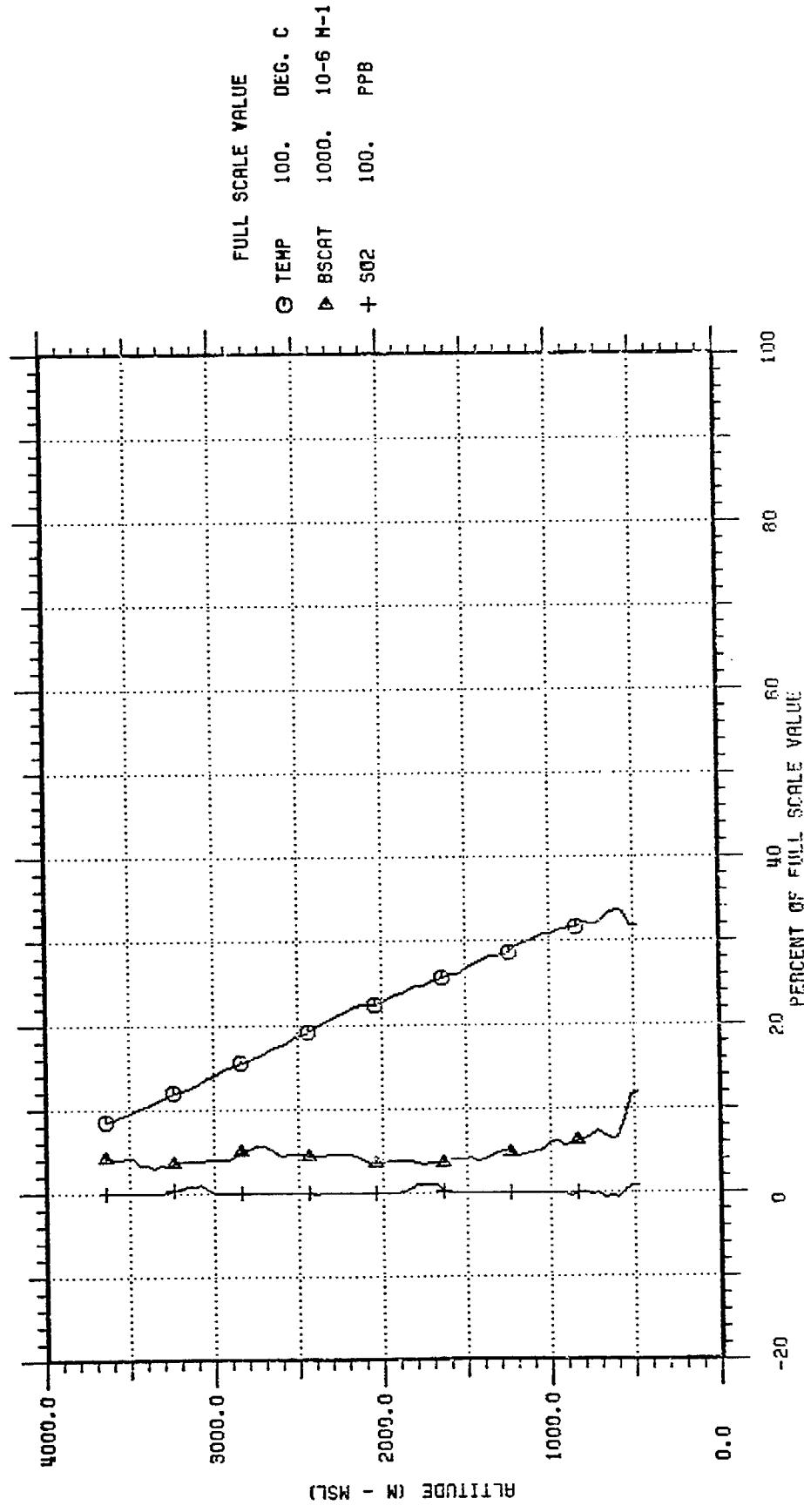
PASS: 256/6 DATE: 7 /22/81
TIME: 1846 TO 1917 (PDT)



600925:1
19:3C:37

SED TRANSPORT
SPECTRAL AT POINT 7

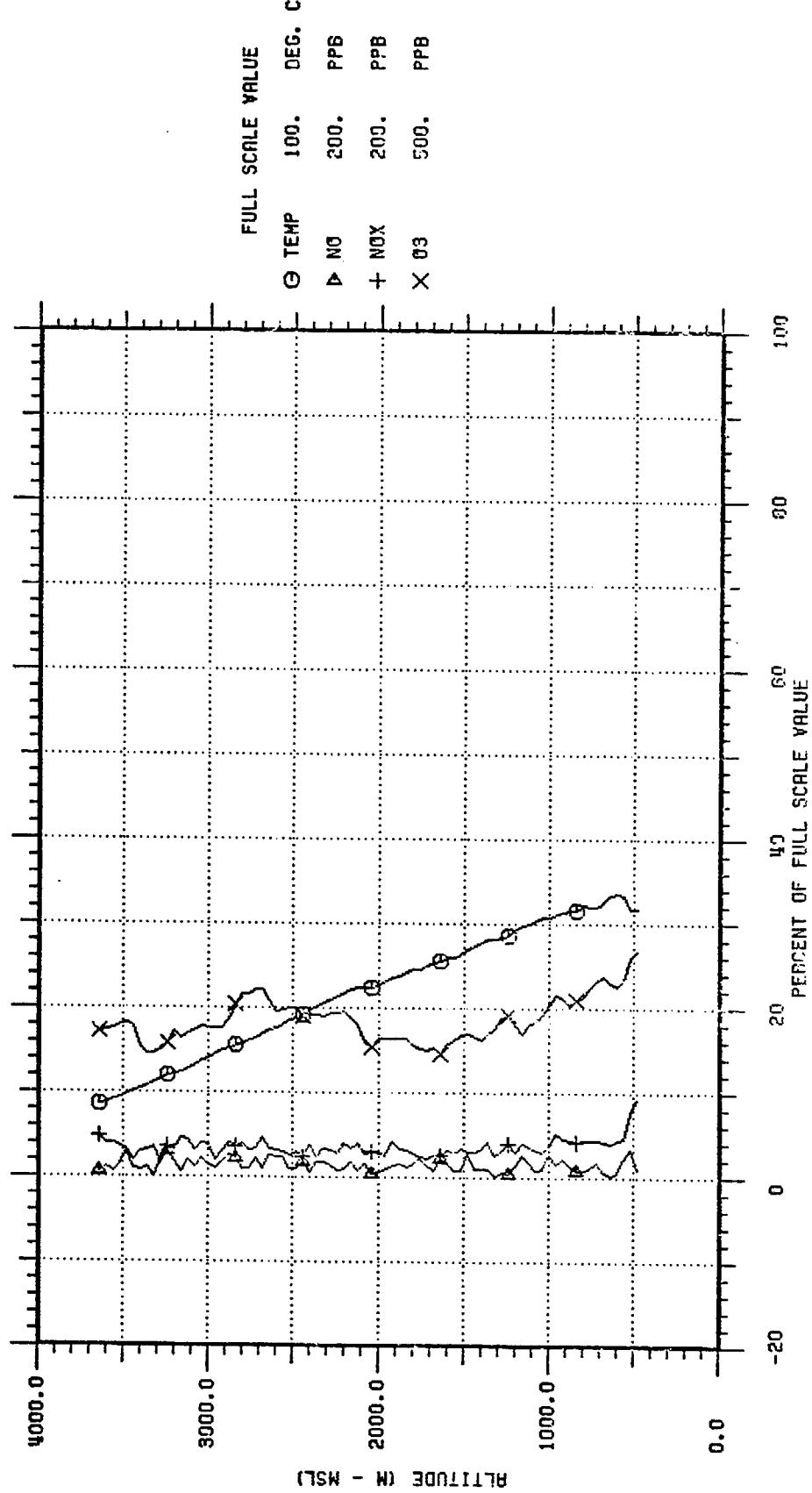
TAPE/PASS: 256/7 DATE: 7 /22/81
TIME: 1924 TO 1947 (PDT)



800925.1
19:30:37

SED TRANSPORT
SPIRAL AT POINT 7

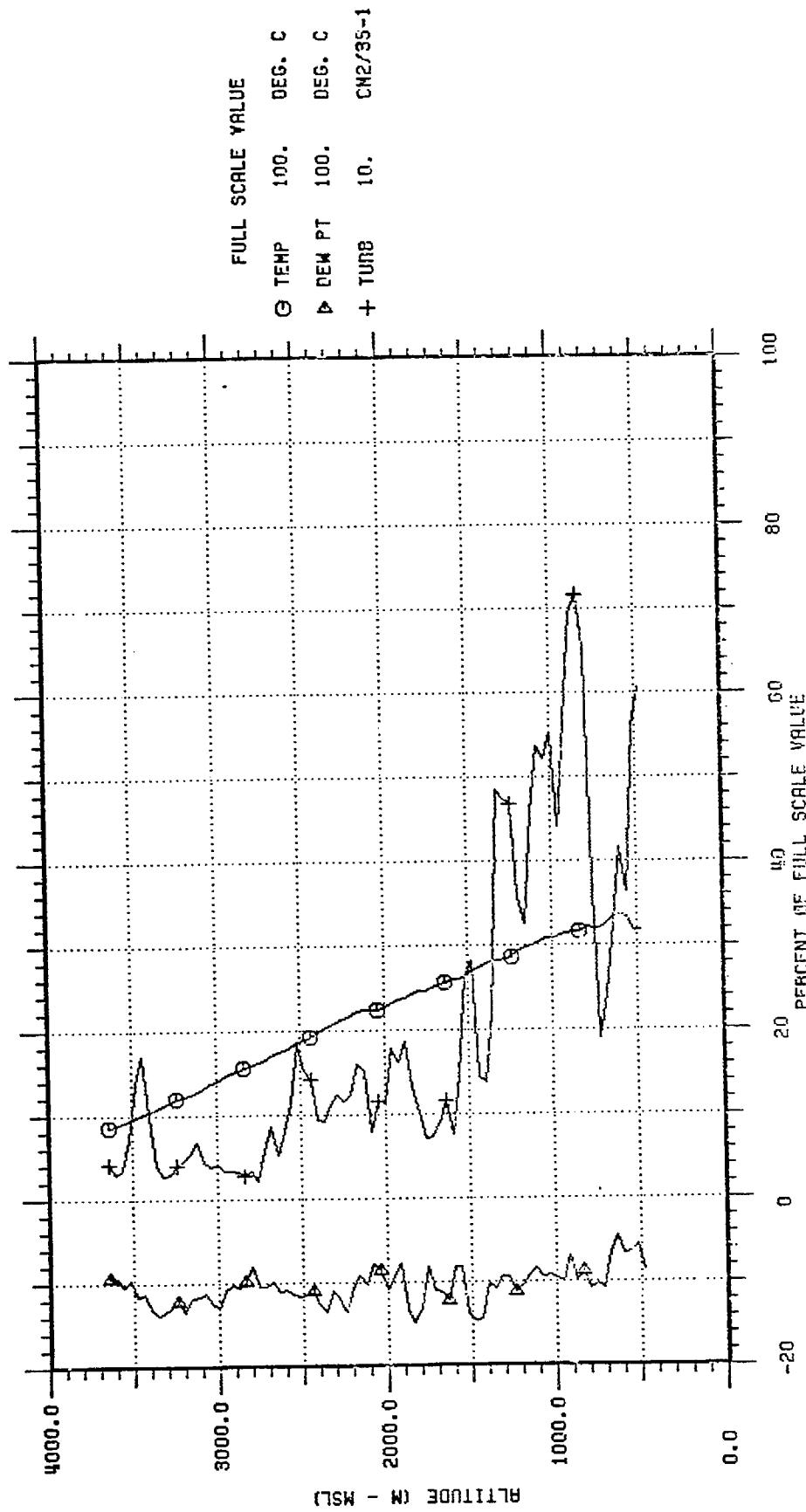
TAPE/PASS: 256/7 DATE: 7/22/81
TIME: 1924 TO 1947 (PDT)



800925.1
1C:30:57

**SED TRANSPORT
SPATIAL AT POINT 7**

TAPE/PASS: 256/7 DATE: 7 /22/81
TIME: 1924 TO 1947 (PDT)

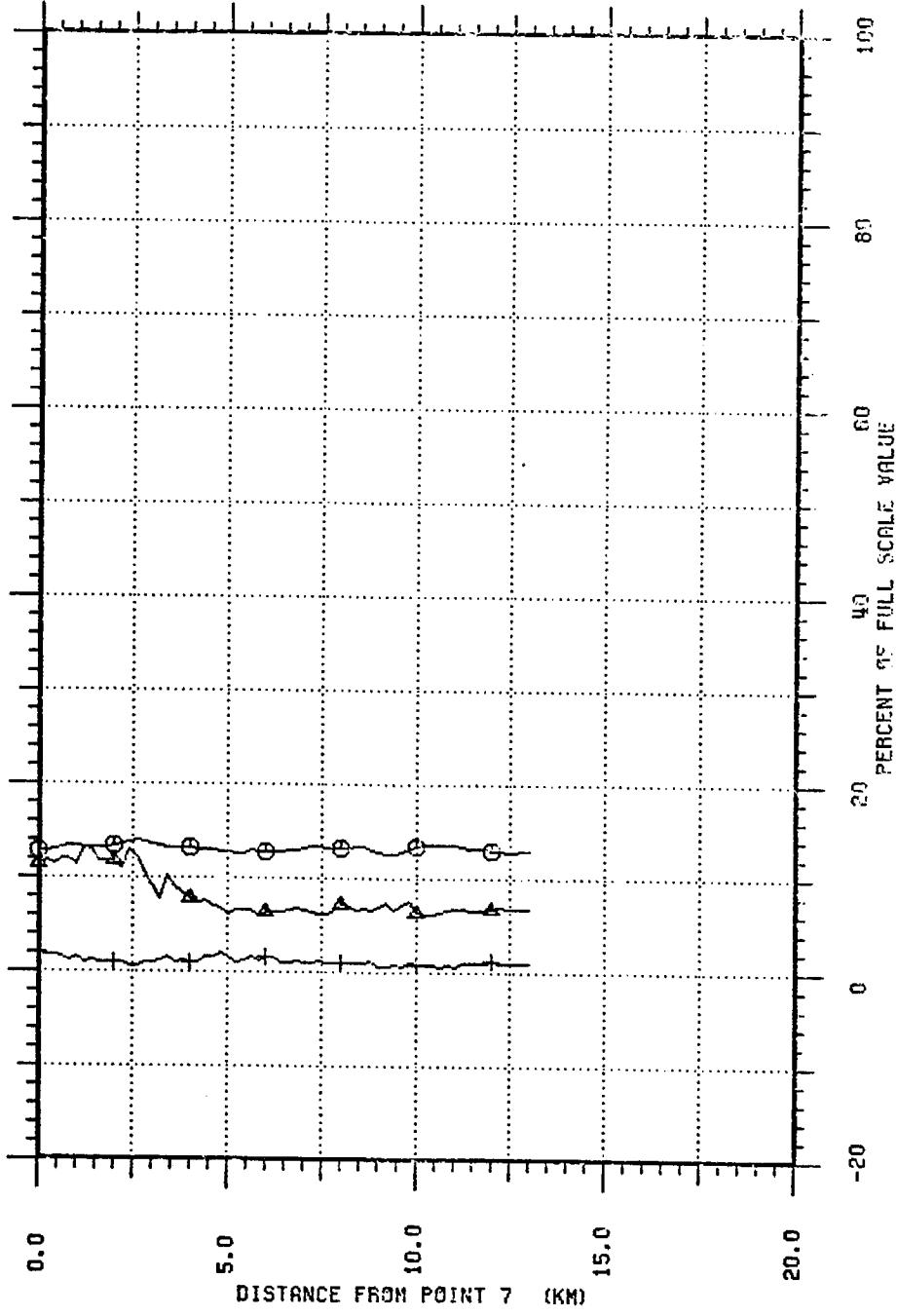


200025.1
19:30:37

SED TRANSPORT

TRAVESE FROM POINT 7 TO POINT 8 (518 M MSL) TAPE/PASS: 256/8 DATE: 7/22/81

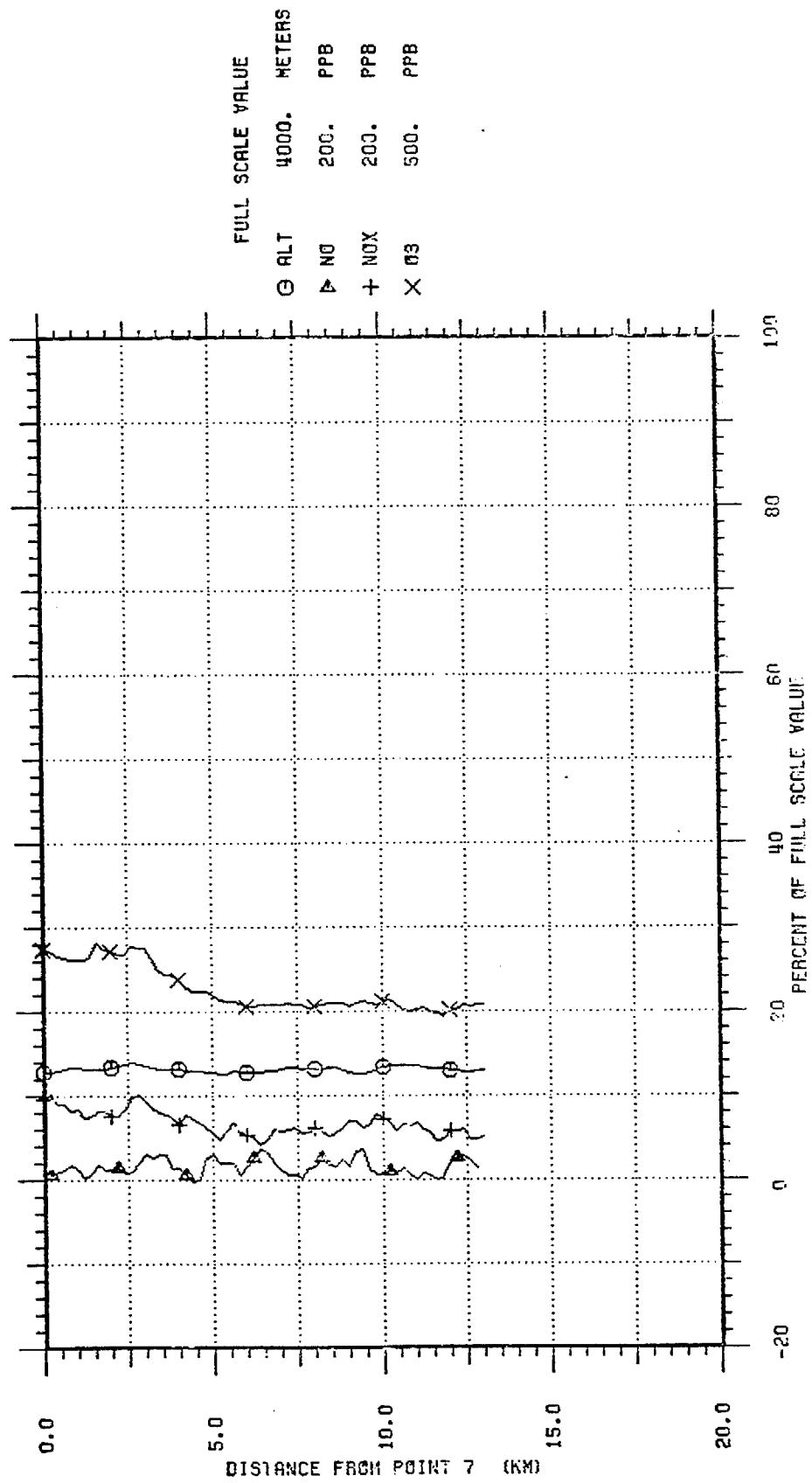
TIME: 1949 TO 1953 (PDT)



890925.1
19:53:02

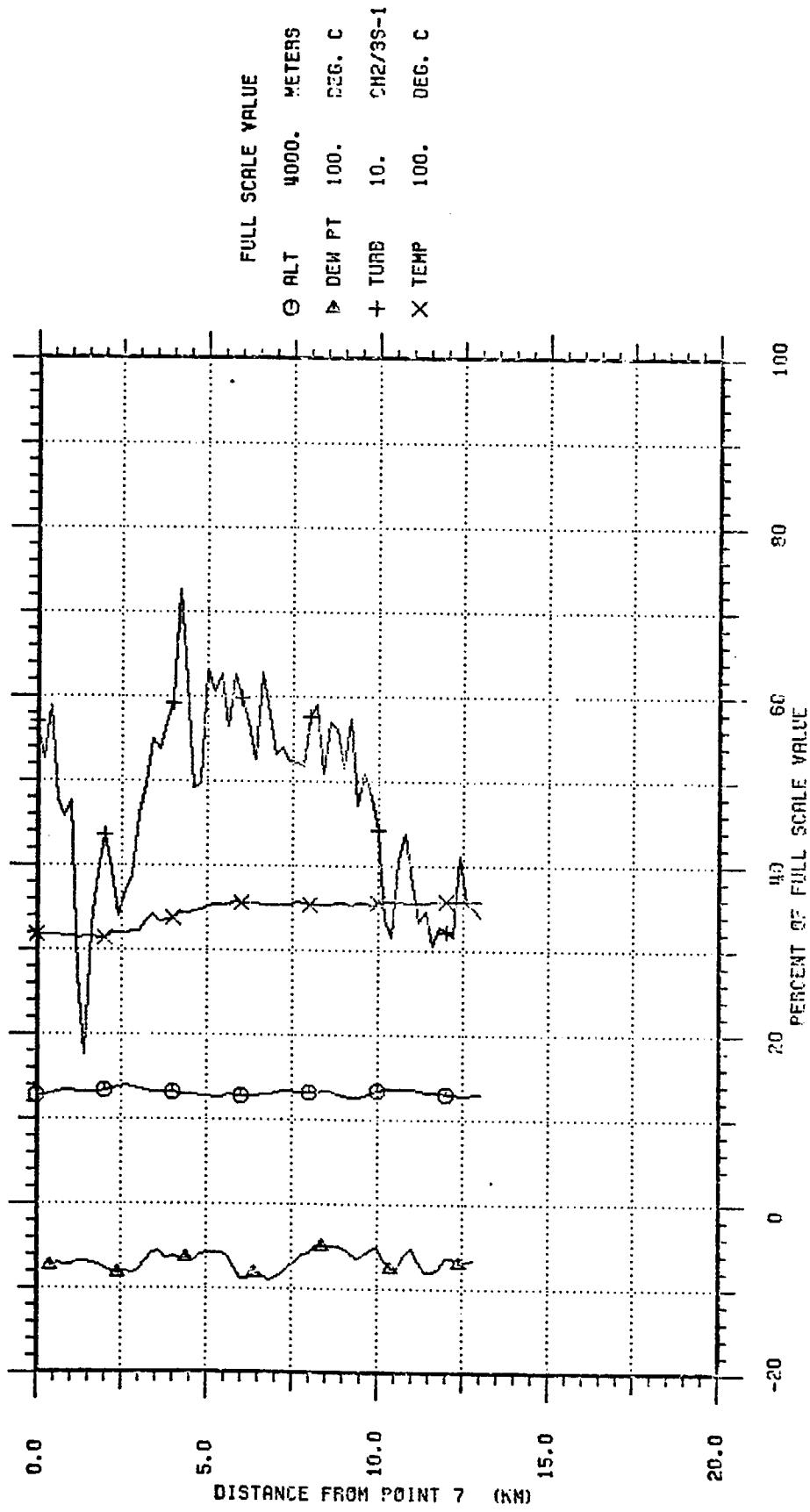
SED TRANSPORT
TRaverse from Point 7 to Point 8 (518 M MSL)

TAPE/PASS: 256/8 DATE: 7/22/81
TIME: 1949 TO 1953 (PDT)



800825.1
19:56:32

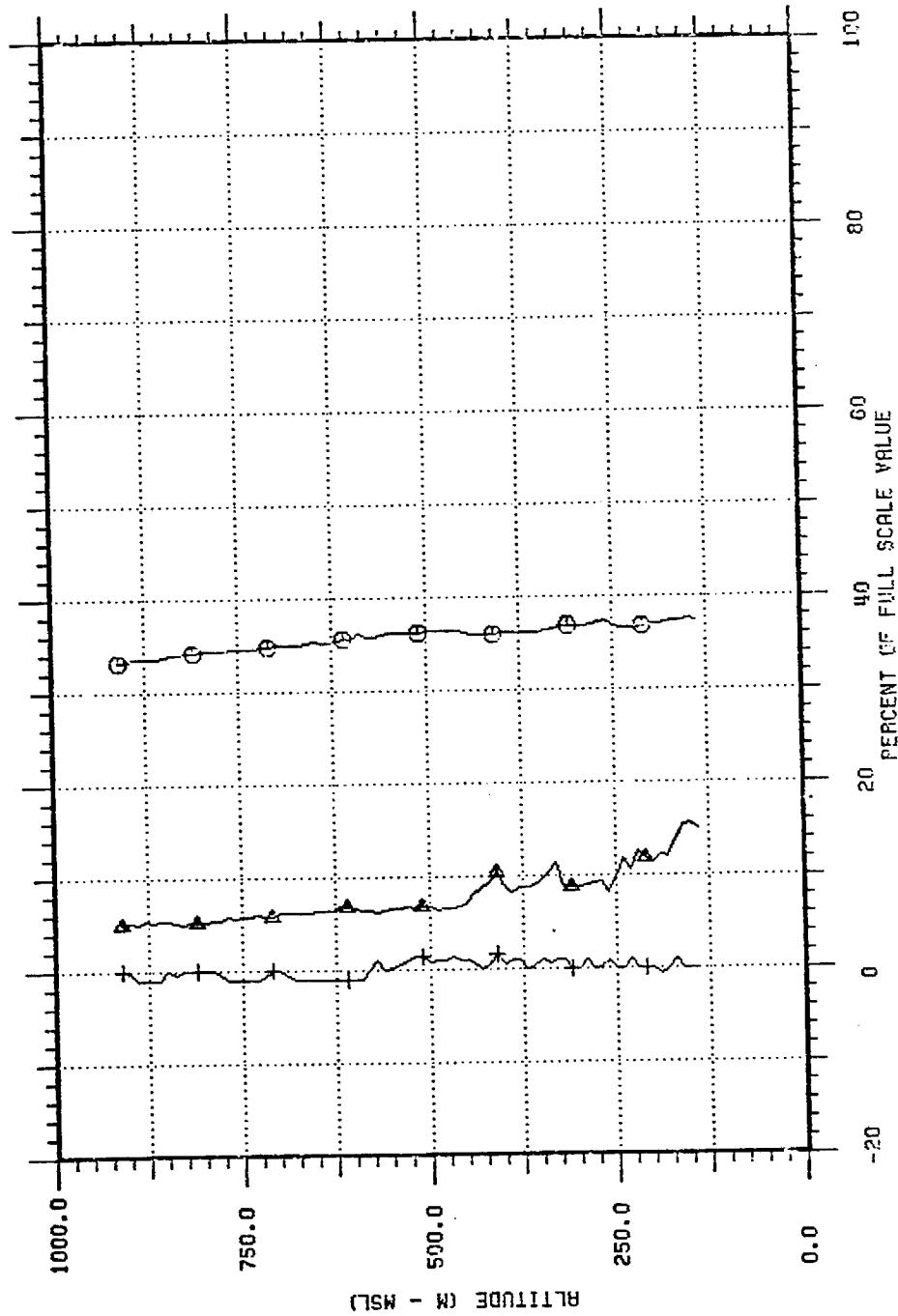
SED TRANSPORT
TRaverse from Point 7 to Point 8 (510 M MSL) TAPE/PASS: 256/8 DATE: 7/22/81
TIME: 1949 TC 1953 (PDT)



600025.1
13:56.02

SED TRANSPORT
SPIRAL AT POINT 9

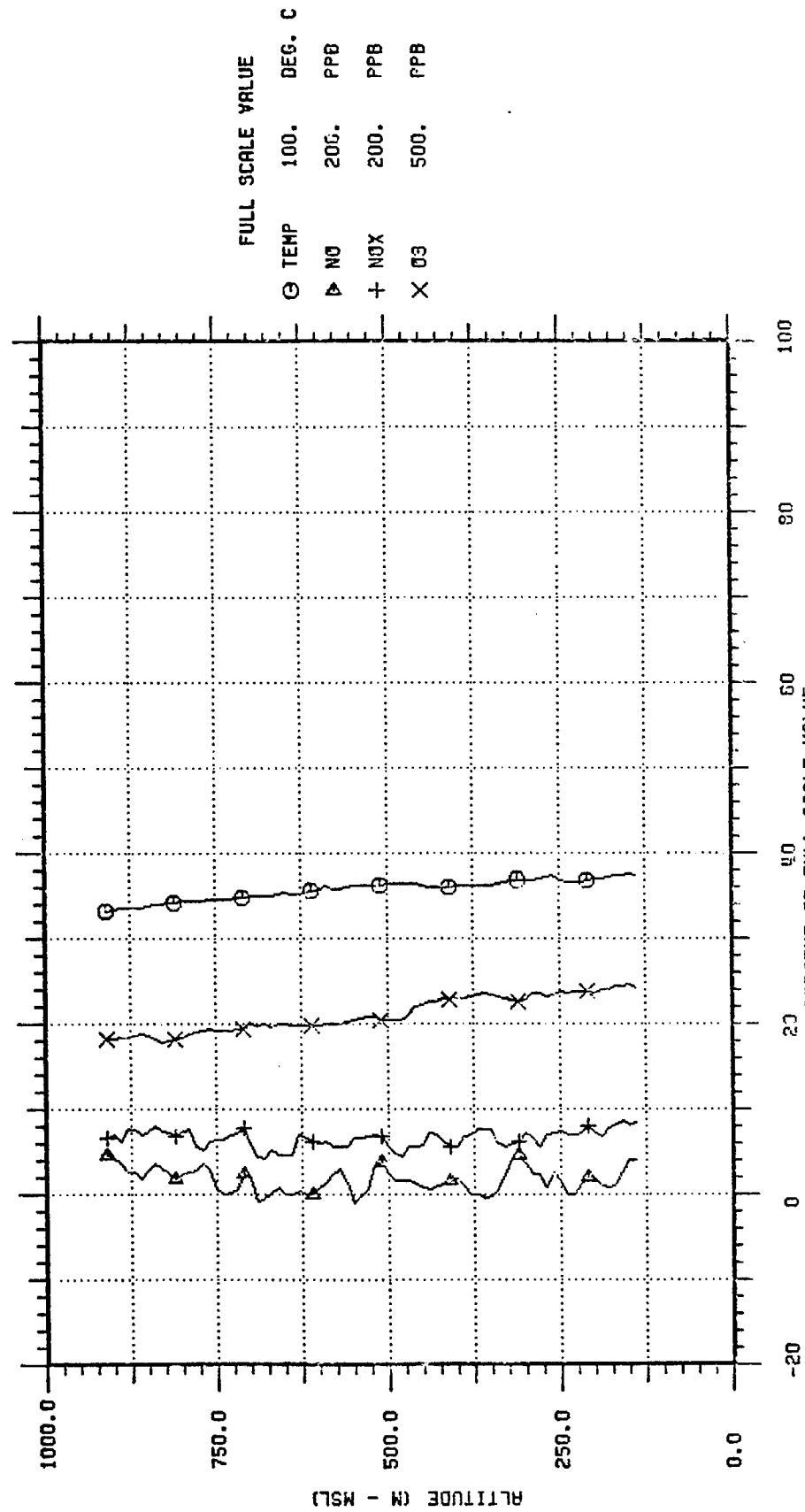
TAPE/PASS: 256/9 DATE: 7 /22/81
TIME: 1956 TO 2002 (PDT)



2000925.1
13:31:37

SED TRANSPORT
SPIRAL AT POINT 9

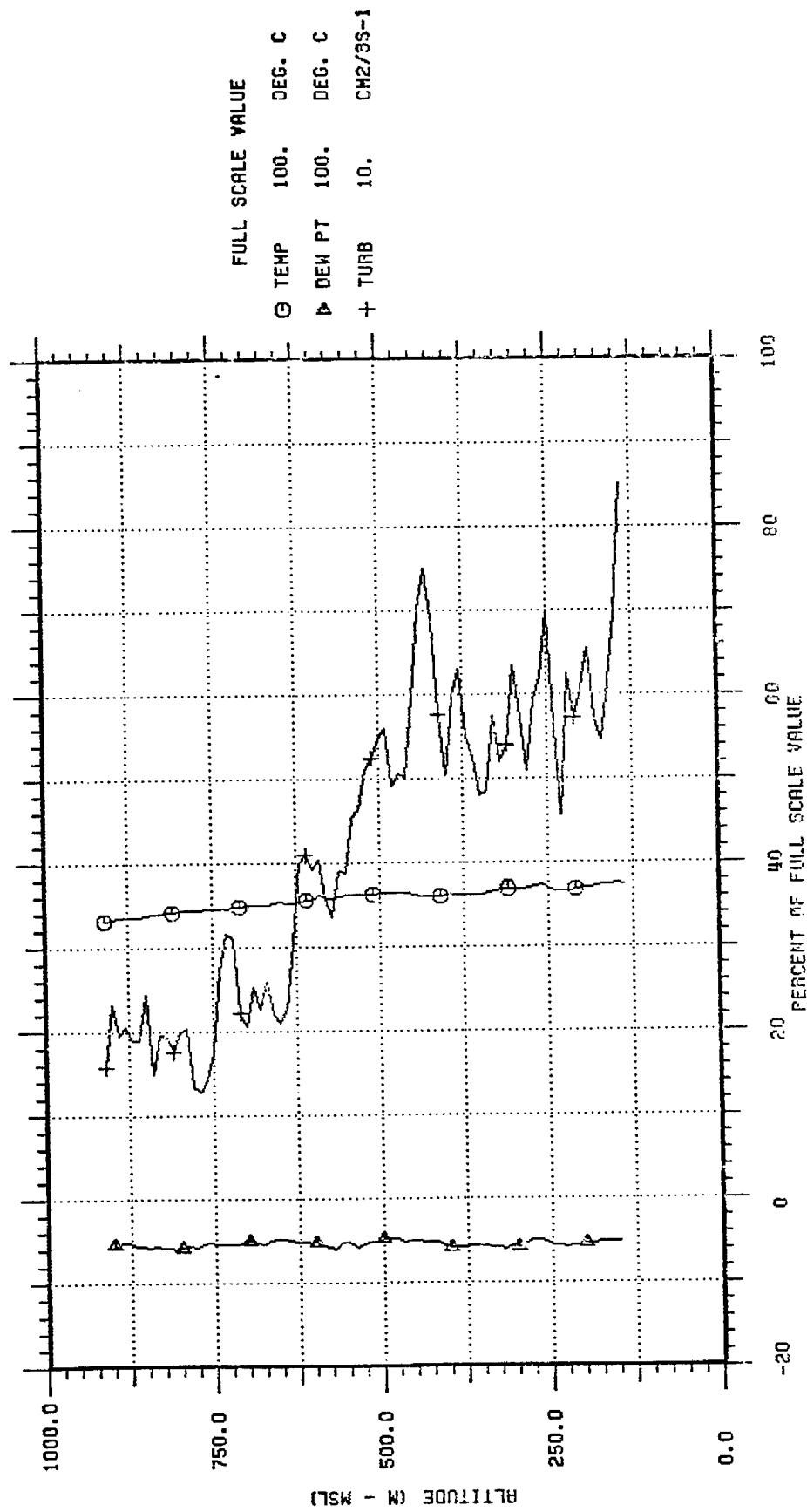
TAPE/PASS: 256/9 DATE: 7 /22/81
TIME: 1956 TO 2002 (PDT)



8000925.1
1N:36:37

**SED TRANSPORT
SAMPLING AT POINT 9**

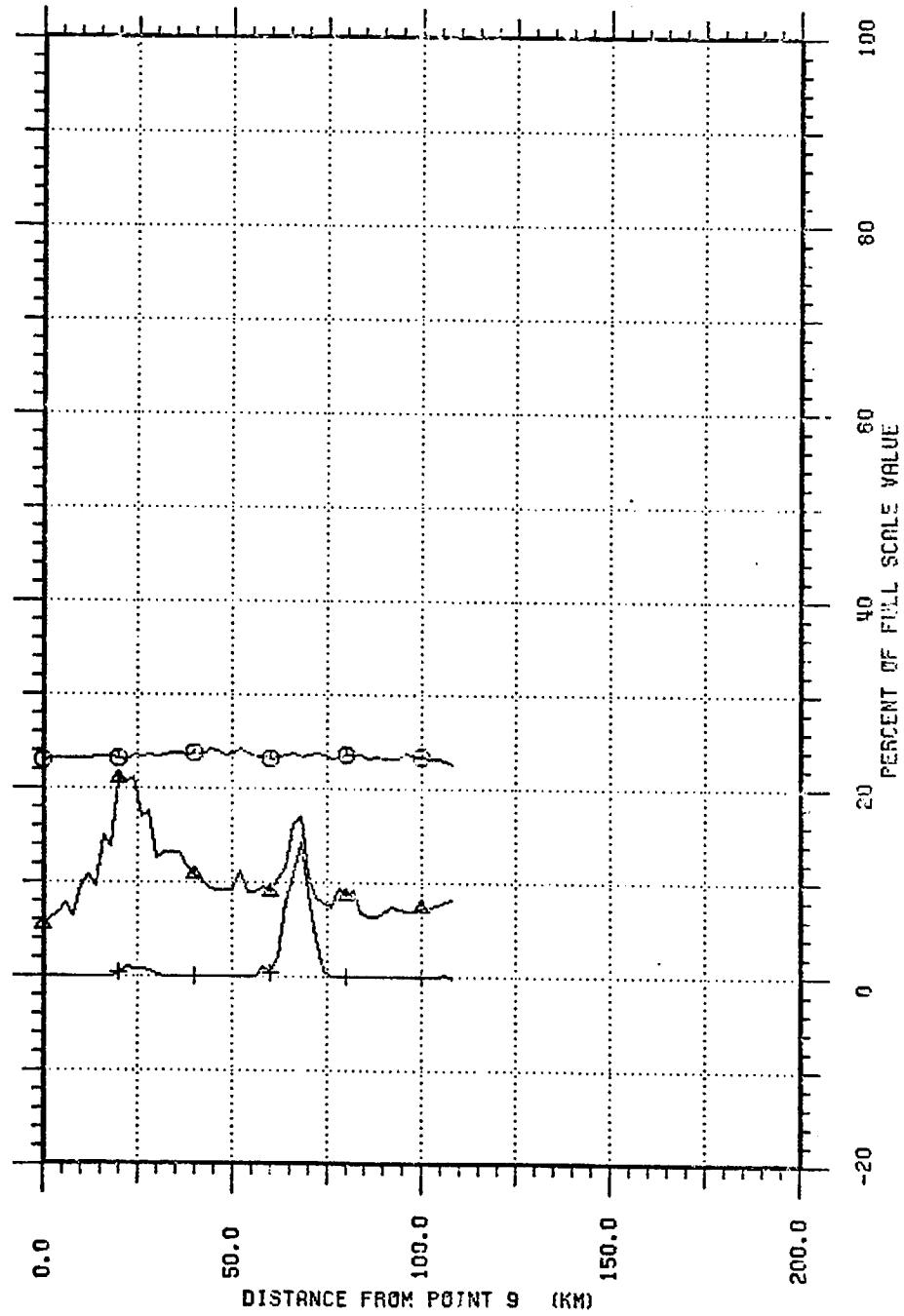
TAPE/PASS: 256/9 DATE: 7 /22/81
TIME: 1956 TO 2002 (PDT)



E000325.1
19,35;37

SED TRANSPORT

TAPE/PASS: 256/10 DATE: 7 /22/81
TRAVESE FROM POINT 9 TO POINT 10 (914 M MSL) TIME: 2003 TO 2039 (PDT)

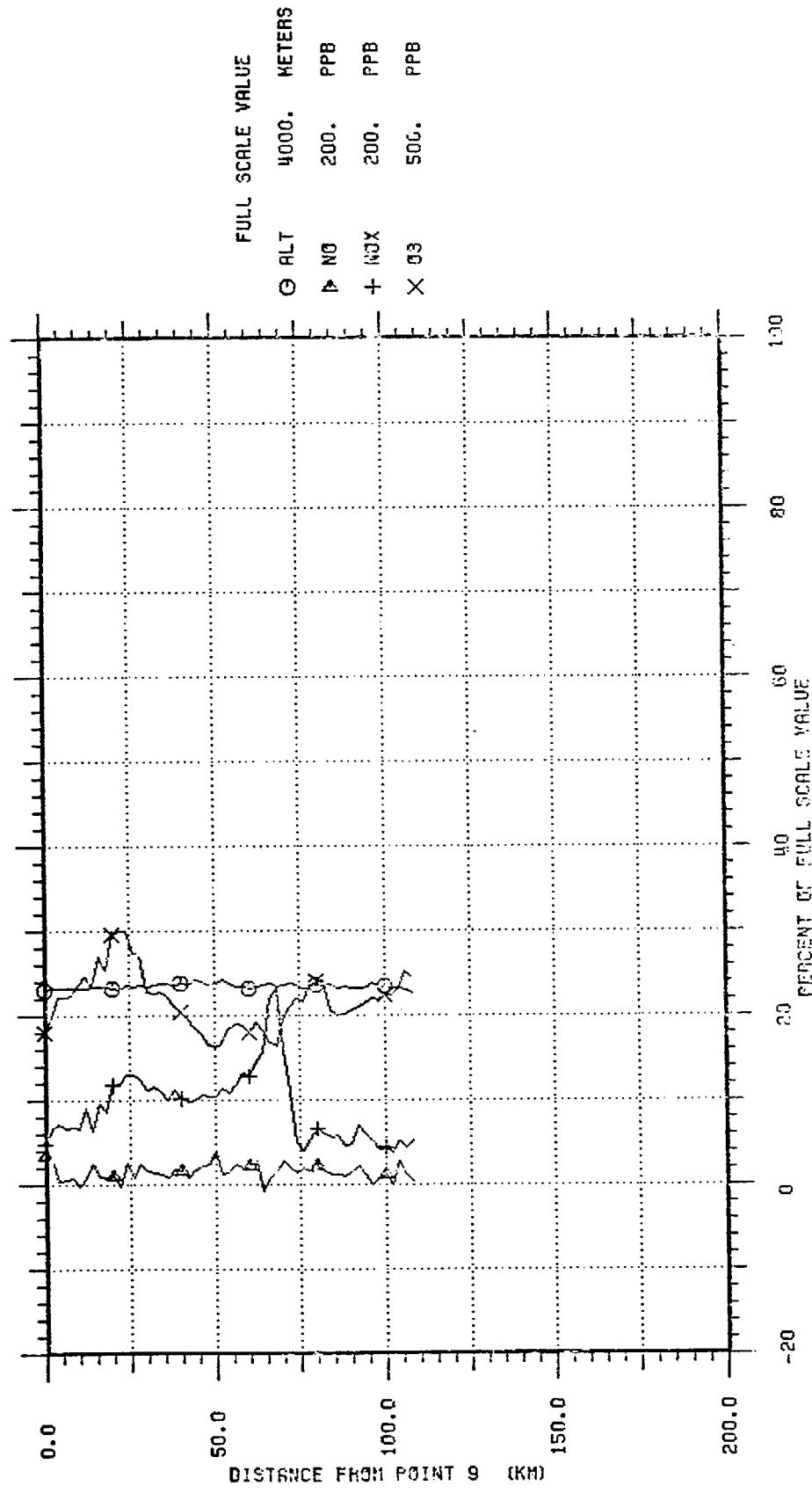


200G925-1
13:36:03

SED TRANSPORT

TRAVERSE FROM POINT 9 TO POINT 10 (914 M MSL) TIME: 2003 TO 2039 (POT)

TAPE/PASS: 256/10 DATE: 7/22/81

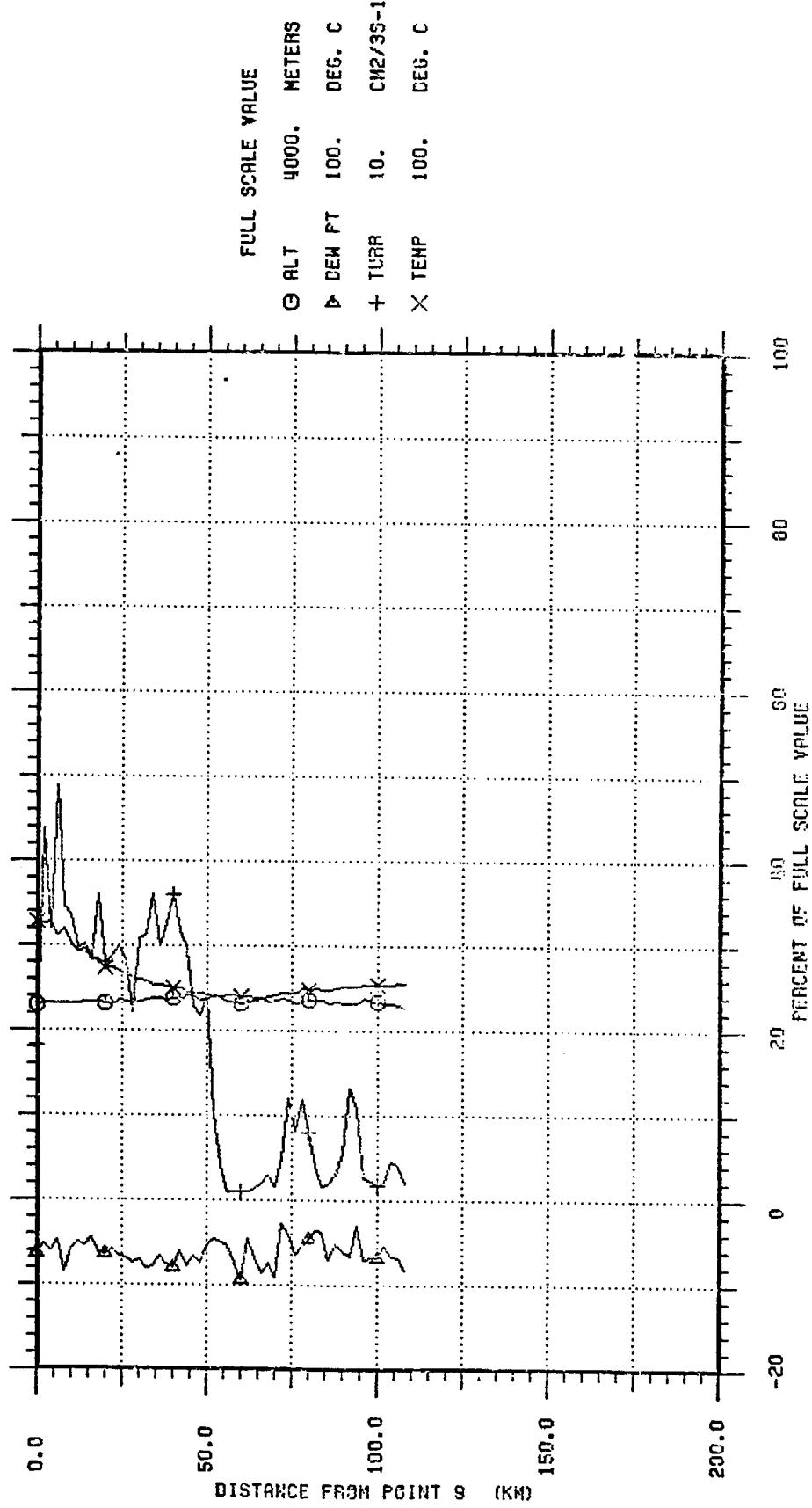


800255.
10:56.03

SED TRANSPORT

TRaverse from POINT 9 TO POINT 10 (914 M MSL)

TAPE/PASS: 256/10 DATE: 7 /22/81
TIME: 2003 TO 2039 (PDT)



300925.1
13:56:02

Date: July 23, 1981

MRI FLIGHT SUMMARY

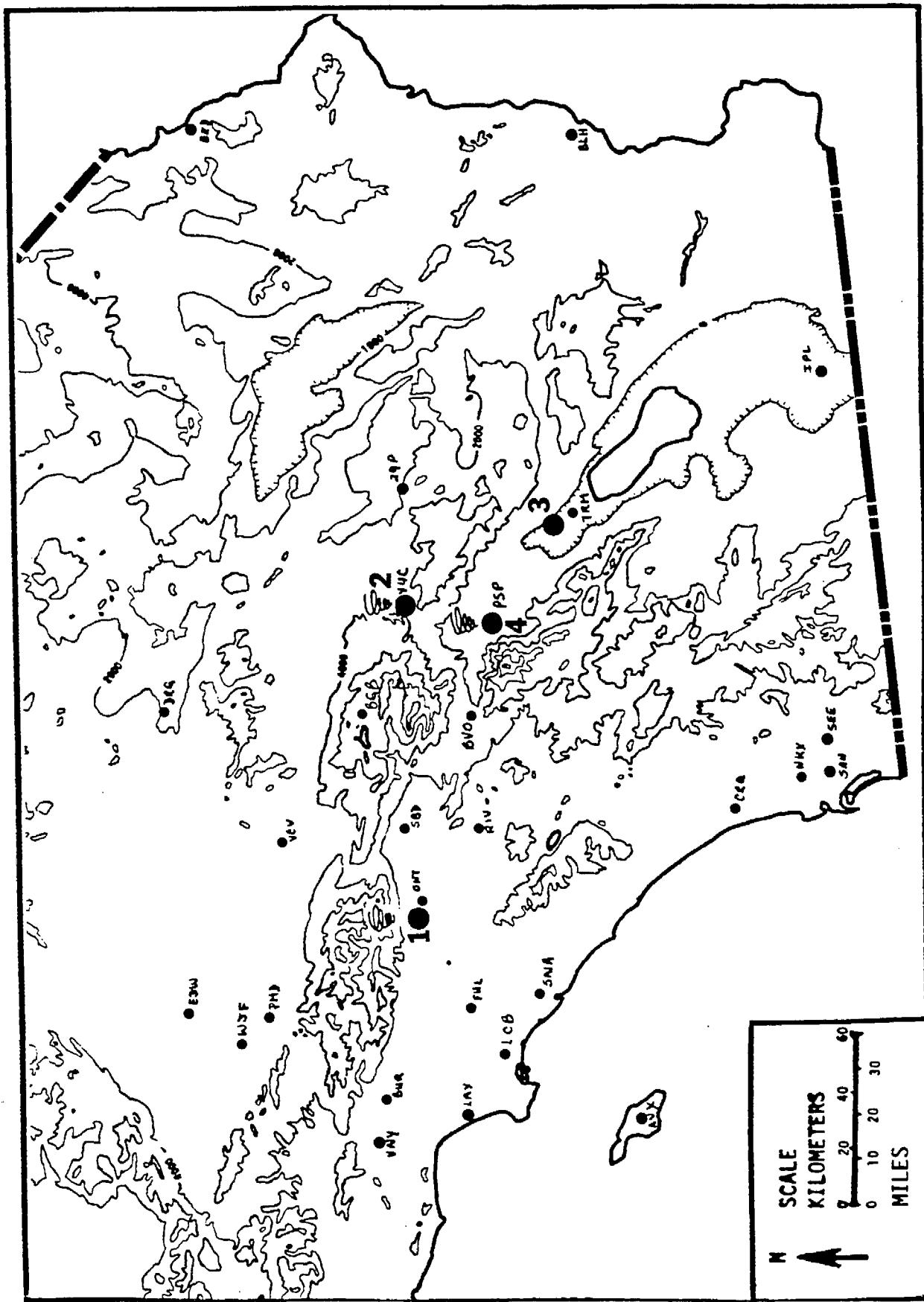
SOUTHEAST DESERT OZONE TRANSPORT STUDY

Tape #: 257

Pass No.	Sampling Times (PDT) Start End	Flight Type	End Points	Sampling Altitude m MSL Start End	Traverse Length or Orbit Time	Tracer Samples	Comments
1	652	710	Spiral	1	442-2286	N.A.	61-14 Sfc Elev = 442 m
2	743	758	Spiral	2	3353- 914	N.A.	615-31 Sfc Elev = 915 m
3	817	839	Spiral	3	-13-2591	N.A.	632-49 Sfc Elev = -21 m
4	850	912	Spiral	4	2896- 107	N.A.	650-69 Sfc Elev = 107 m

23 July 1981 Tape #257
TRAVERSE END POINT AND SPIRAL LOCATIONS

POINT	LATITUDE	LONGITUDE	DESCRIPTION
1	34°07.0'	117°41'	Cable Airport
2	34°08.0'	116°24.6'	Yucca Valley Airport
3	33°42.0'	116°10.5'	(South of Indio) 16nm/PSP radial
4	33°49.5'	116°30.5'	Palm Springs Airport



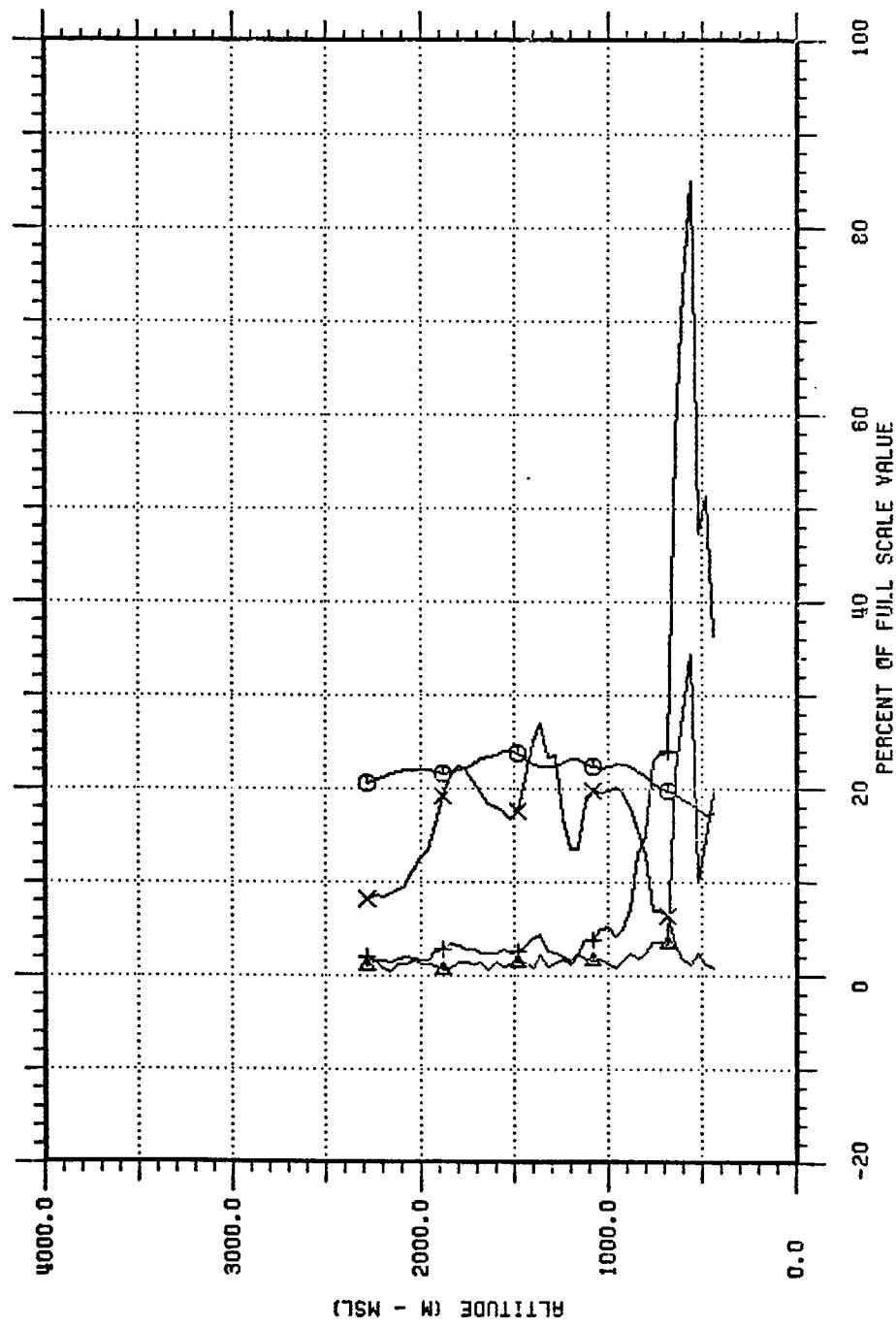
SOUTHEAST DESERT OZONE TRANSPORT STUDY

MRI SAMPLING FLIGHT

July 23, 1981 Tape #257

SED TRANSPORT
SPIRAL AT POINT 1

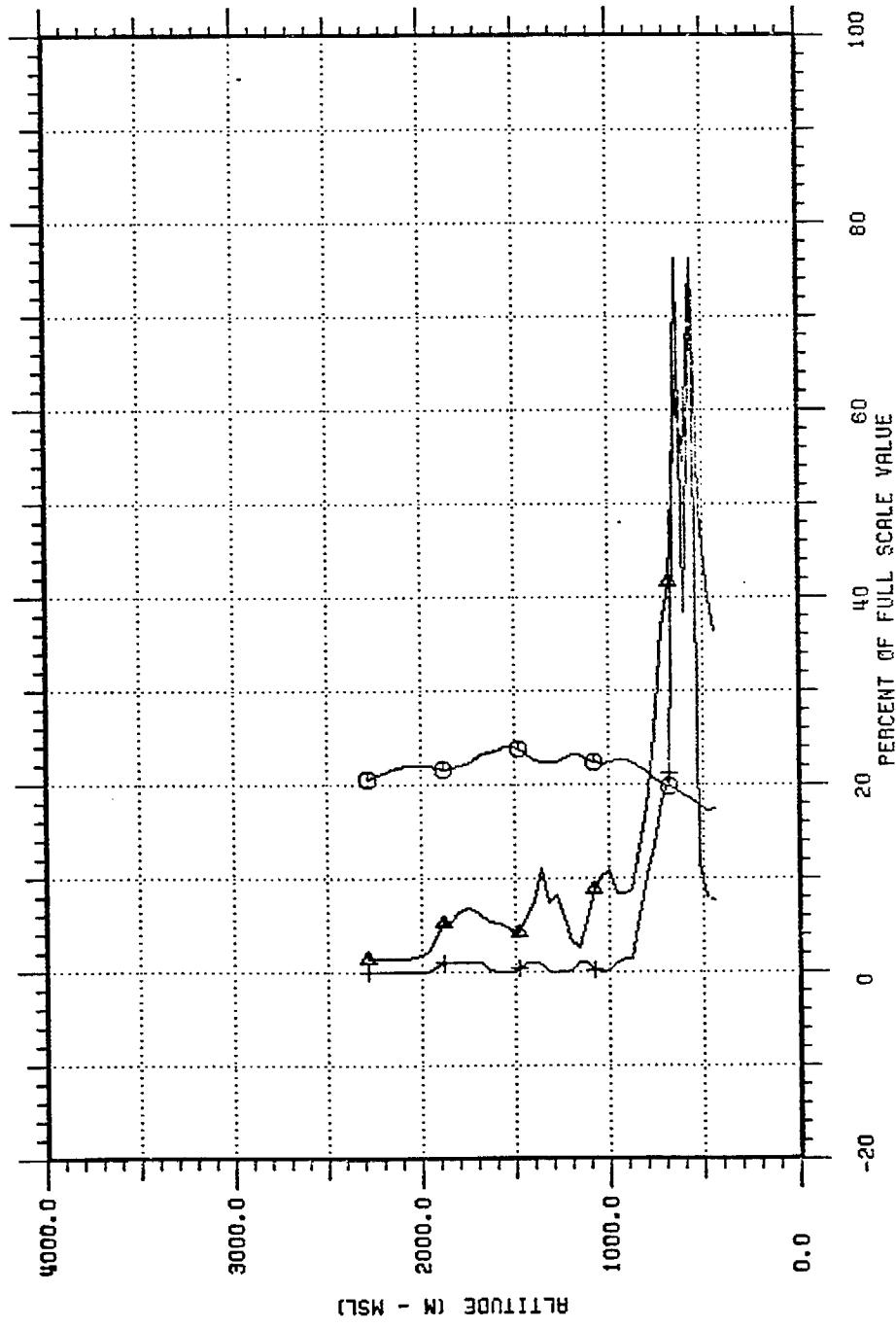
TAPE/PASS: 257/1 DATE: 7 /23/81
TIME: 652 T9 710 (PDT)



600925:1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 1

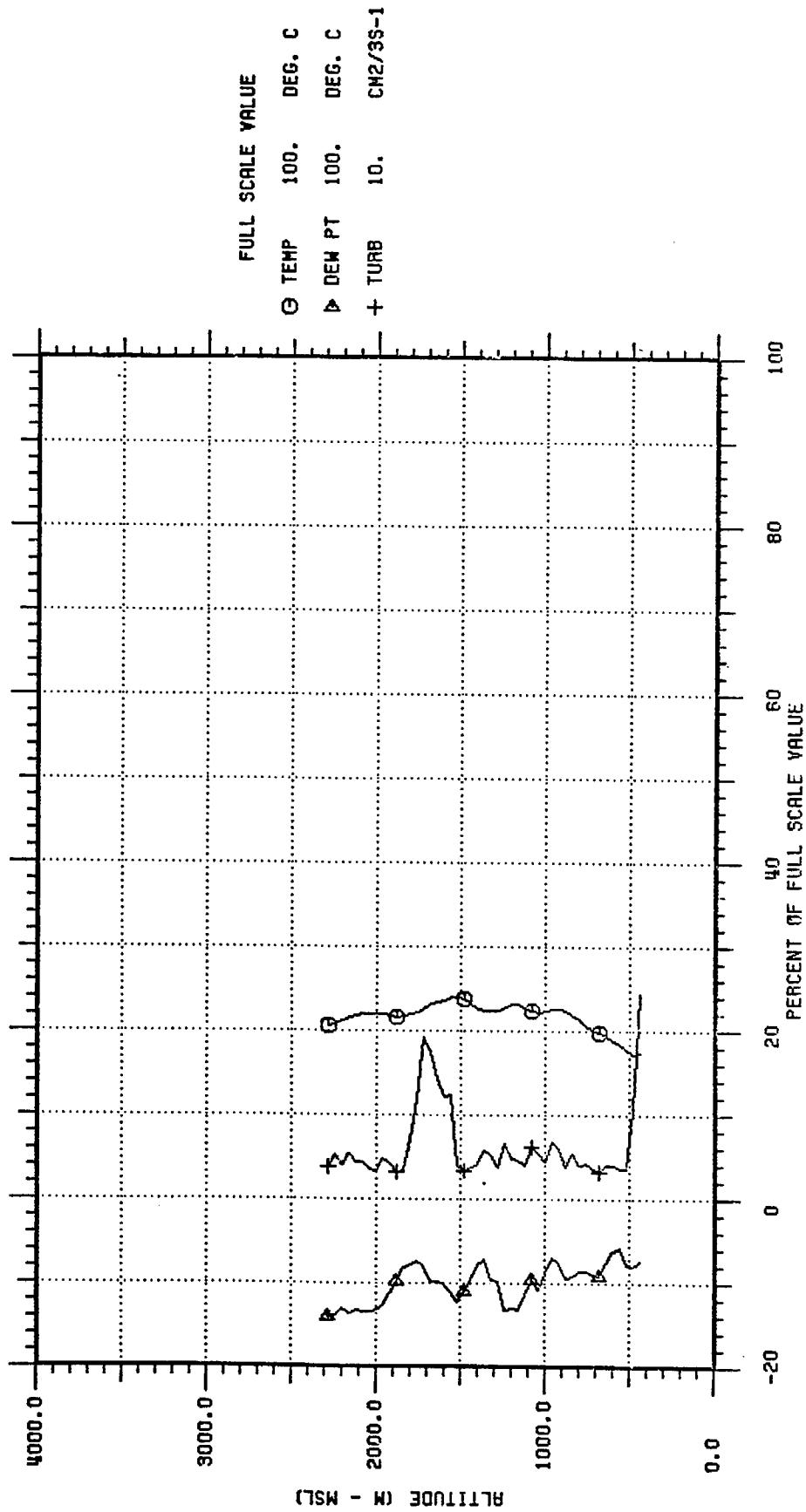
TAPE/PASS: 257/1 DATE: 7 /23/81
TIME: 652 TO 710 (PDT)



809925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 1

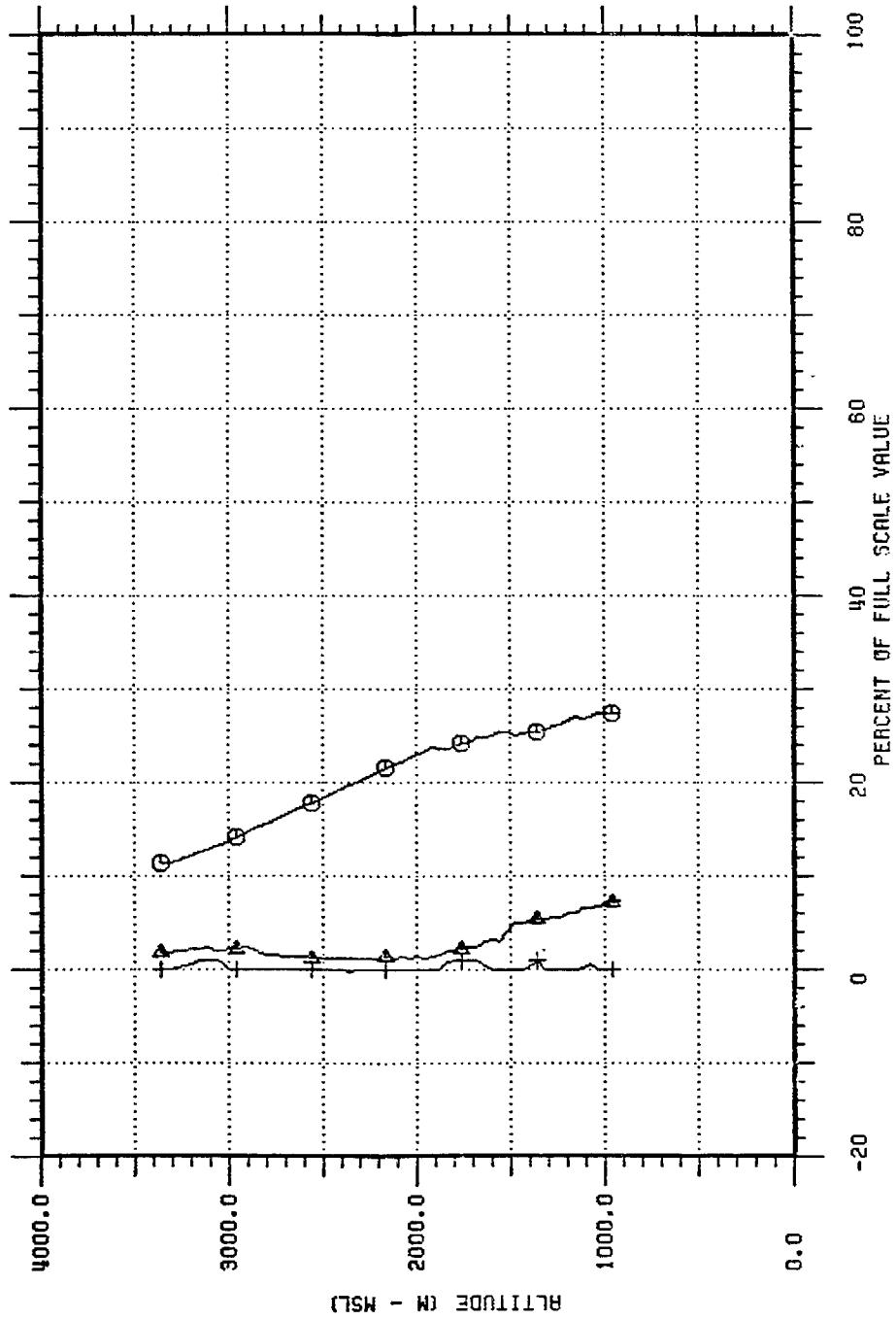
TAPE/PASS: 257/1 DATE: 7/23/81
TIME: 652 TO 710 (PDT)



8000925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 2

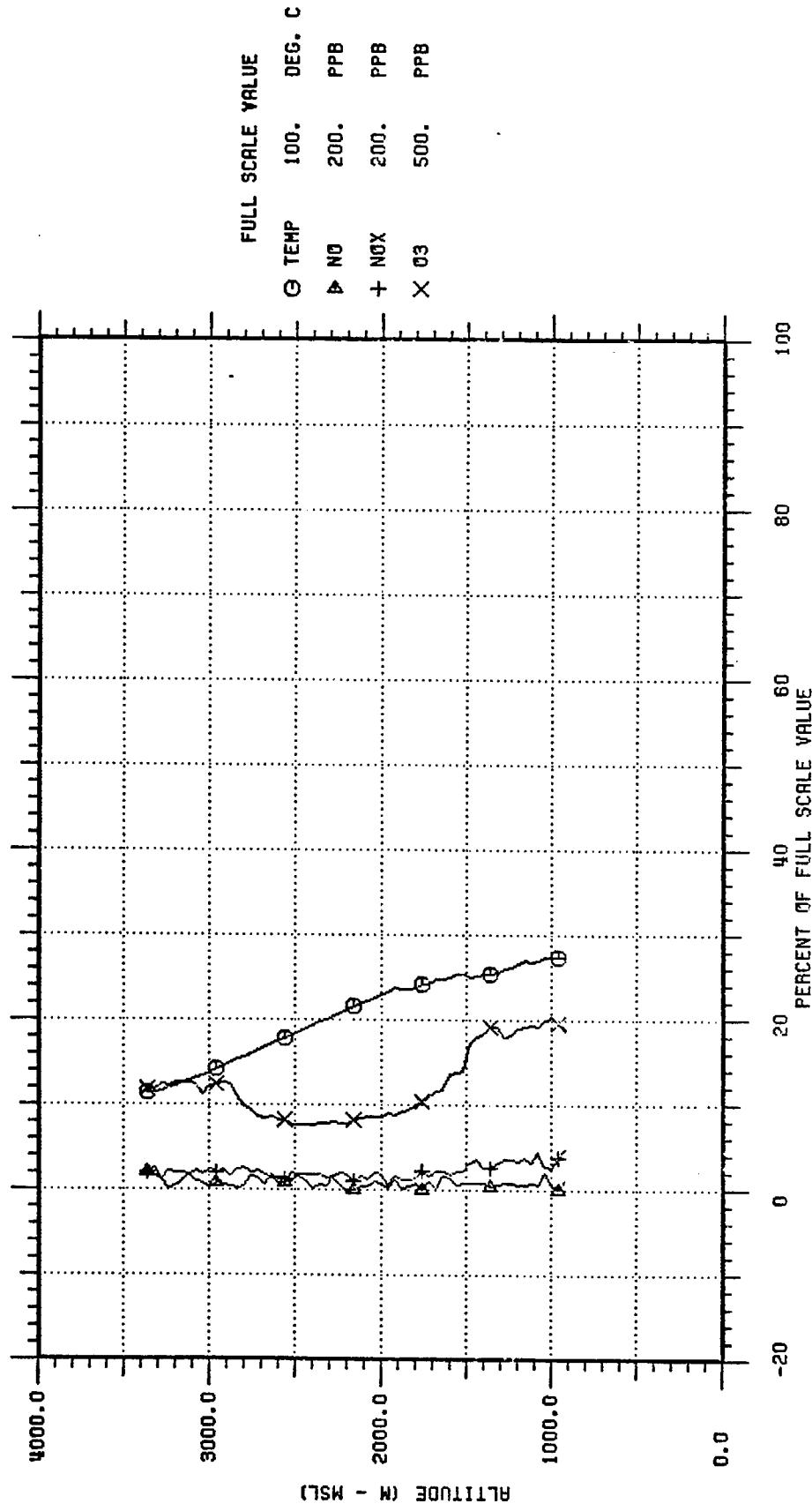
TAPE/PASS: 257/2 DATE: 7 /23/81
TIME: 743 TO 758 (PDT)



800925.1
20:24:20

SED TRANSPORT
SPURIAL AT POINT 2

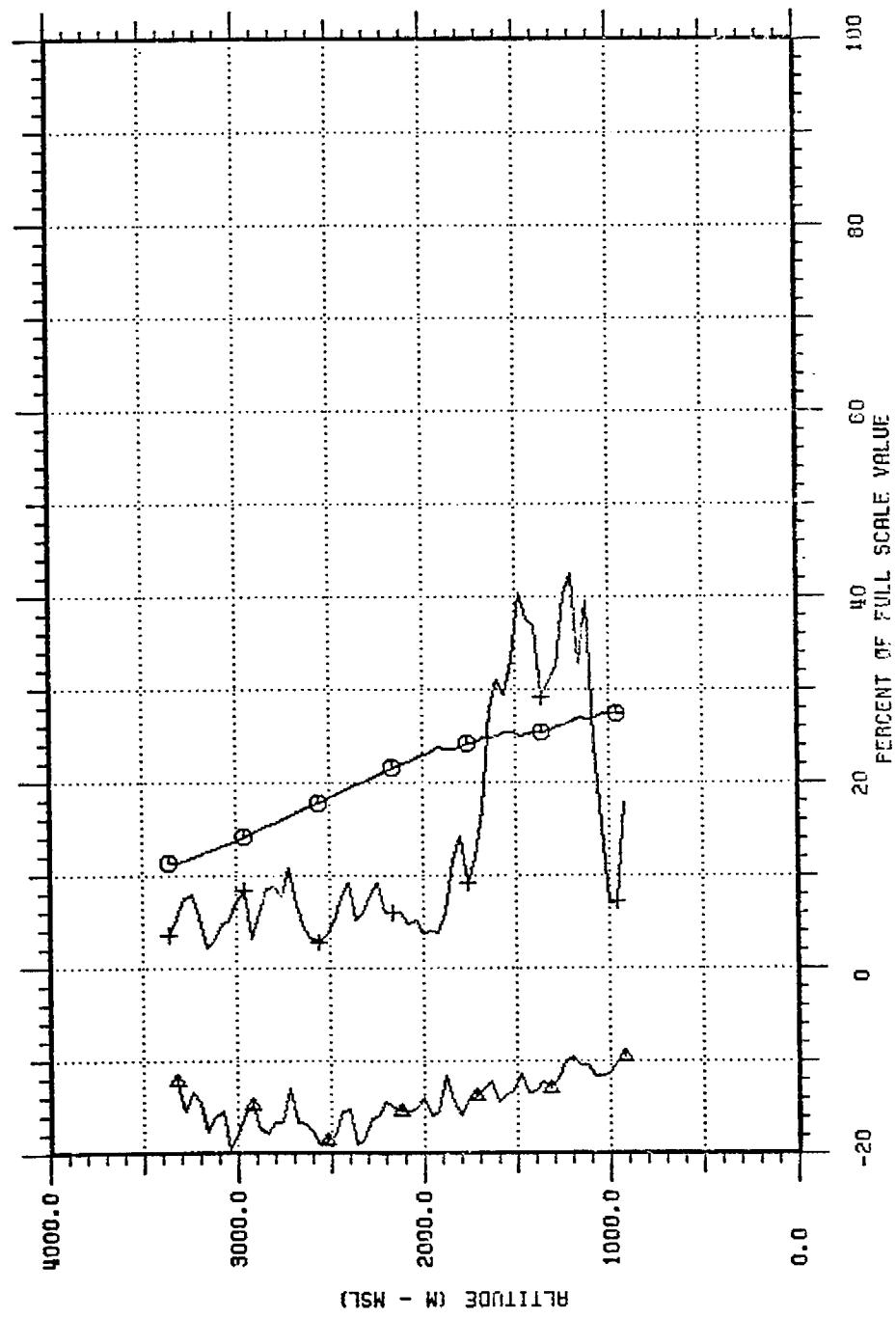
TAPE/PASS: 257/2 DATE: 7/23/81
TIME: 743 TO 758 (PDT)



800925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 2

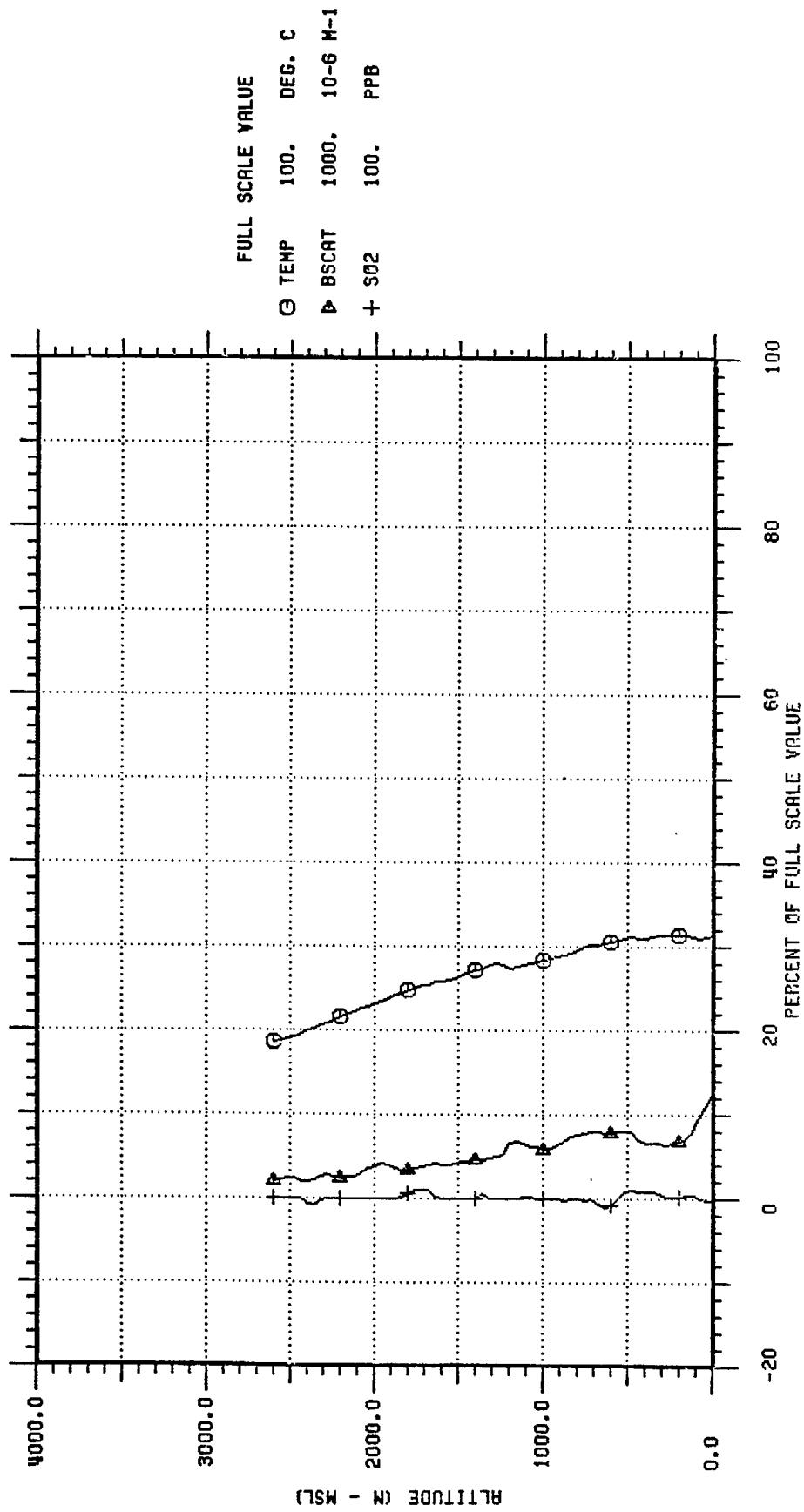
TAPE/PASS: 257/2 DATE: 7 /23/81
TIME: 743 TO 758 (PDT)



800925:
20:24:20

SED TRANSPORT
SPIRAL AT POINT 3

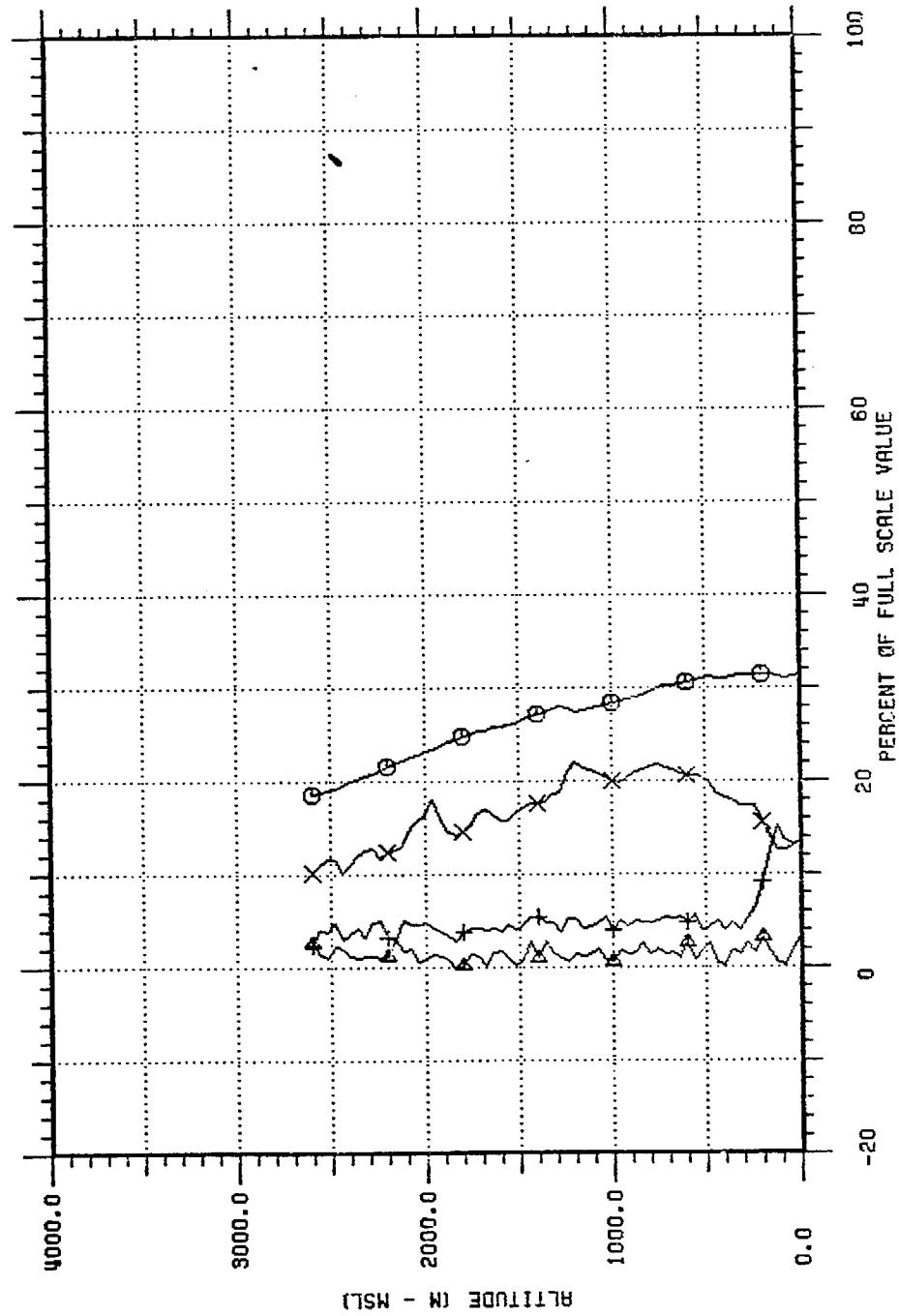
TAPE/PASS: 257/3 DATE: 7 /23/81
TIME: 817 TO 839 (PDT)



800925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 3

TAPE/PASS: 257/3 DATE: 7 /23/81
TIME: 817 TO 839 (PDT)

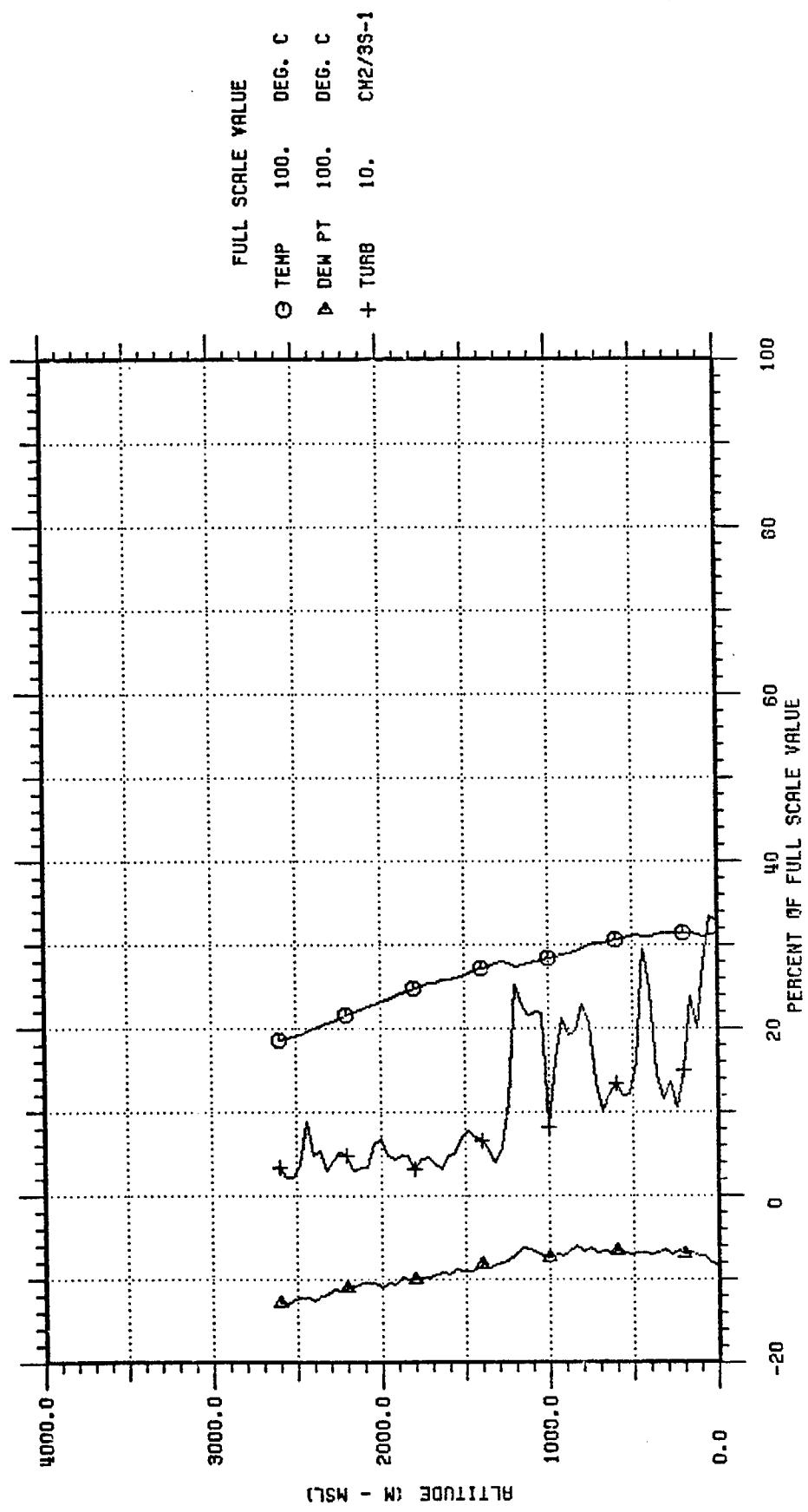


FULL SCALE VALUE
G TEMP 100. DEG. C
▷ NO 200. PPB
+ NOX 200. PPB
X O3 500. PPB

800925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 3

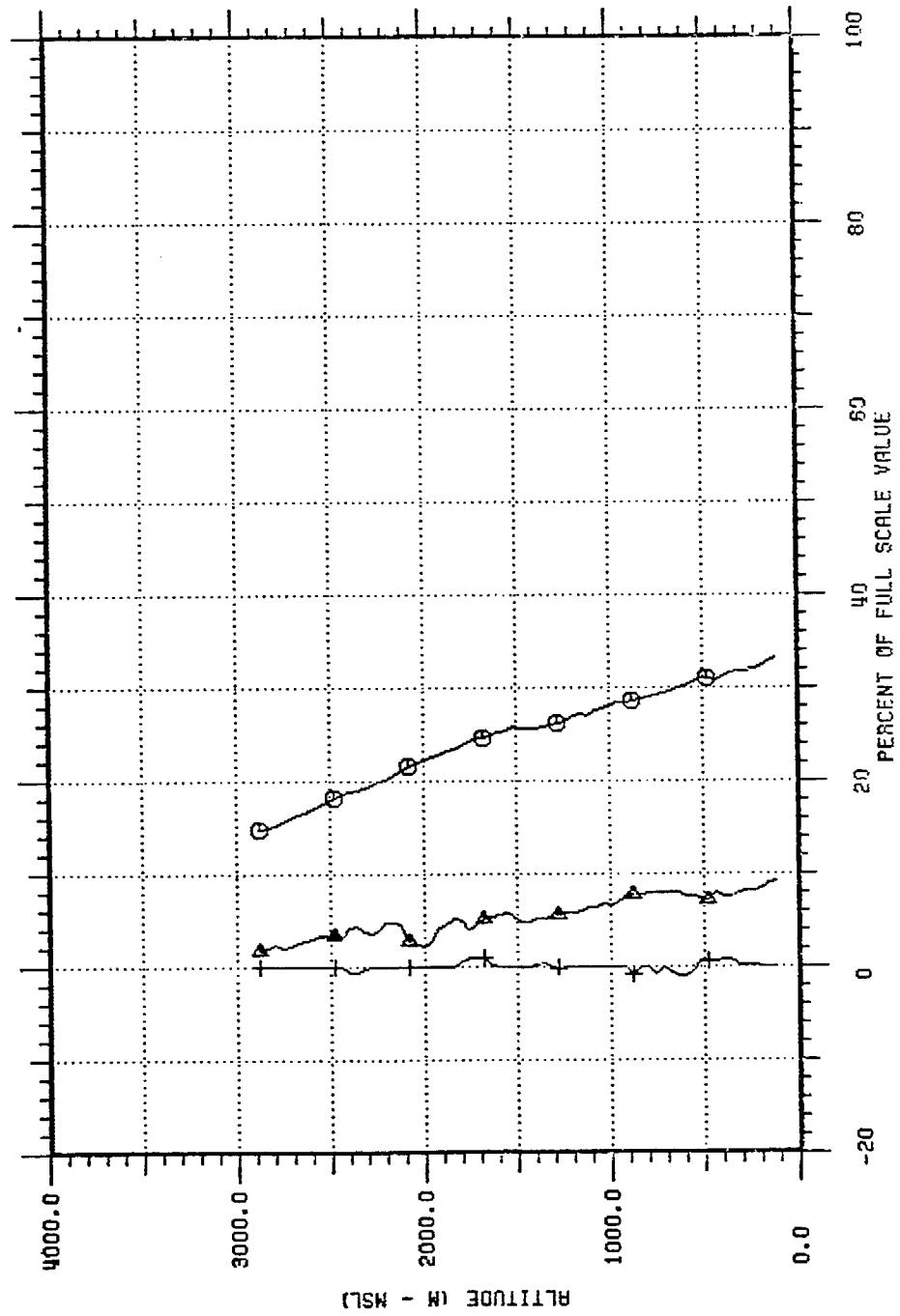
TAPE/PASS: 257/3 DATE: 7 /23/81
TIME: 617 TO 839 (PDT)



800925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 4

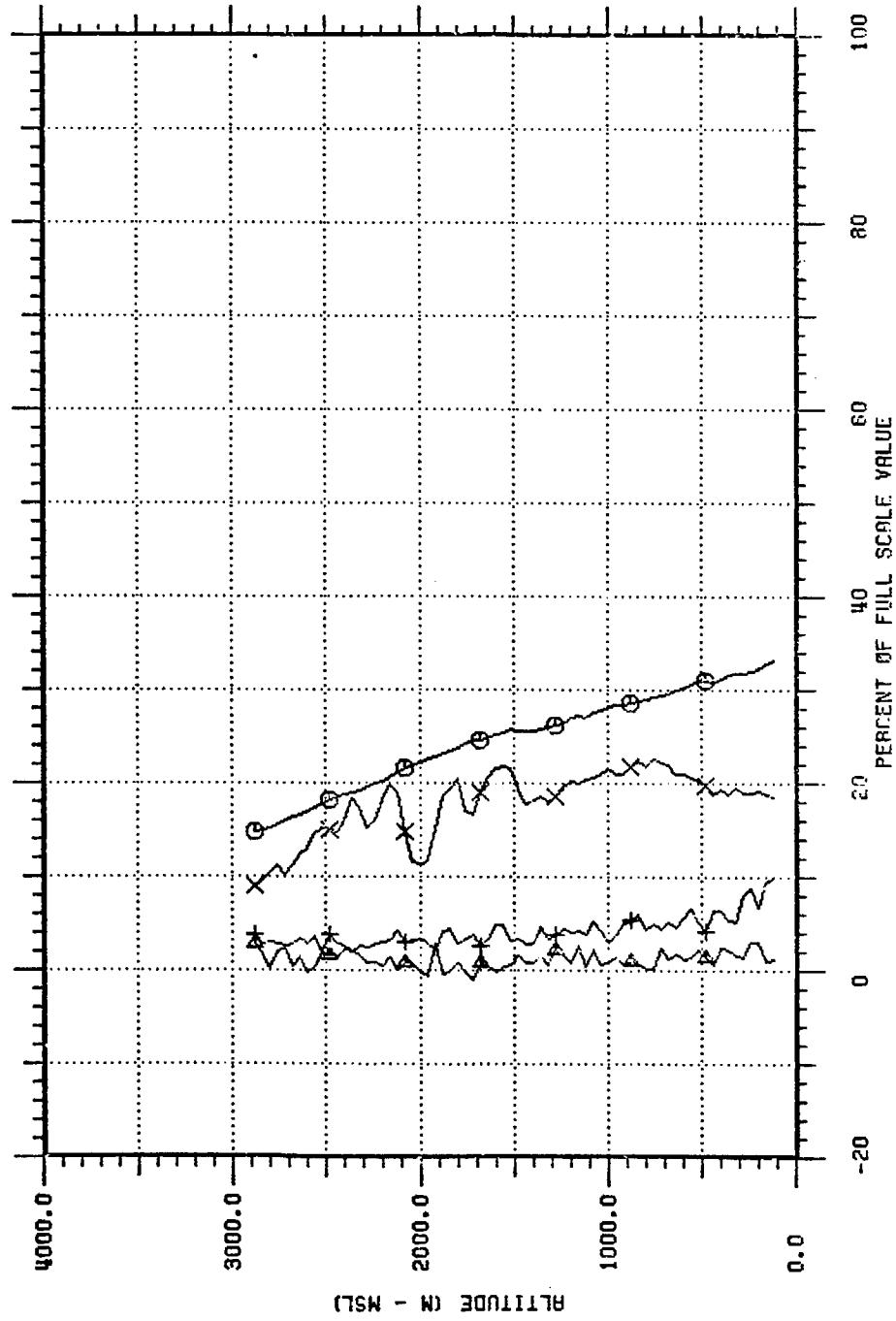
TAPE/PASS: 257/4 DATE: 7 /23/81
TIME: 050 TO 012 (PDT)



600925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 4

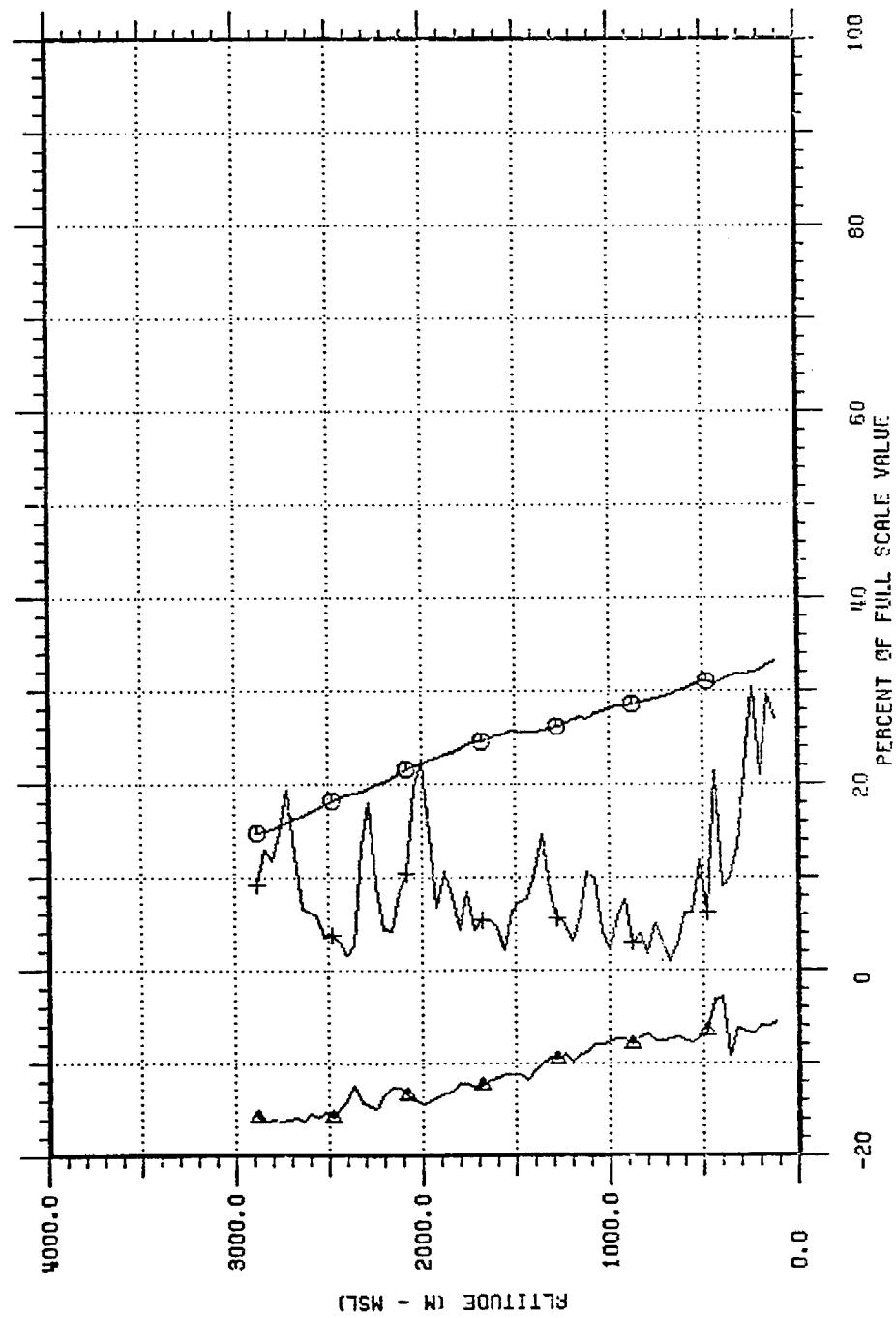
TAPE/PASS: 257/4 DATE: 7/23/81
TIME: 850 TG 912 (PDT)



800925.1
20:24:20

SED TRANSPORT
SPIRAL AT POINT 4

TAPE/PASS: 257/4 DATE: 7 /23/81
TIME: 850 TO 912 (PDT)



800925.1
20:24:29